THE OXFORD GEOGRAPHIES

THE ELEMENTARY GEOGRAPHY

VOL. IV: ASIA

By F. D. HERBERTSON

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KIRGHIZ STEPPES
Aral Sea
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Amu (Oxus)
Zerafshan
Tarim
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Caucasus
CASPIAN SEA
ASIA MINOR
TAURUS
Armenia
Euphrates
Tigris
Mesopotamia
Cyprus
MEDITERRANEAN
SYRIA
Dead Sea
ARABIA
RED SEA
Persian Gulf
IRAN
TURAN
Murghab
HINDU KOSH
KARAKORAM
Kabul
Punjab
Indus
Sutlej
Raj-putana
Jumna
Ganges
HIMALAYAS
Tropic of Cancer
Narbada R.
Mahanadi R.
Godaveri
W. GHATS
E. GHATS
DECCAN
Kistna
Malabar Coast
Nilgiri Hills
Cauvery
Coromandel Coast
Palk Str.
Ceylon
Lakkadive Is
Maldive Is
ARABIAN SEA
Str. of Bab el Mandeb
INDIAN OCEAN
Fer. Ferghana
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500
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Engl. Miles
W. & A. K. Johnston, Edinburgh, 1904.

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Land above 1,500 feet light brown • above 6,000 feet dark brown

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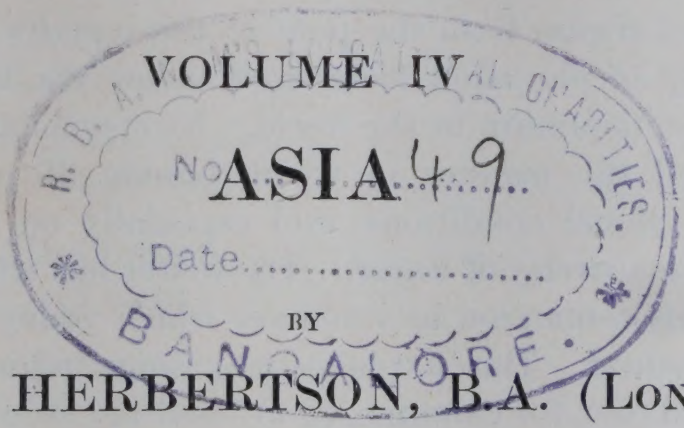
THE ELEMENTARY GEOGRAPHY



VOLUME IV

ASIA

BY

F. D. HERBERTSON, B.A. (LOND.)

WITH 36 ILLUSTRATIONS AND 2 MAPS

SECOND EDITION REVISED BY

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ASSISTANT SECRETARY OF THE BRITISH ASSOCIATION

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PREFACE

THIS volume is a little more advanced than that on Europe. There is much to say for taking the geography of Asia early in school life. In the first place it is not entirely unfamiliar, for children have learned of some of its most characteristic types of life in their Bible lessons. In the second place it shows every type of natural region from the pole to the equator, and every variety of elevation from land below sea level to the highest mountain in the world. No continent illustrates so well the manner in which human life depends on geographical conditions, and especially on the abundance or scarcity of water. The writer has tried to bring out this connexion in a manner which young pupils can understand. This explains why some regions are described (see, for example, §§ 115 and 116) which are little noticed in most elementary books.

It has been difficult to illustrate this volume, for few good pictures of Asia can be bought. The writer is greatly indebted to those who have kindly permitted the use of copyright photographs. In particular she desires to thank the Earl of Ronaldshay and Messrs. Blackwood for the use of Figures 6, 8, 9, 10, 13, 16, 21, and 32; Lord Curzon and the Royal Geographical Society for Figures 3, 5, 22, and 24; D. Frazer, Esq., and Messrs. Blackwood for Figures 4, 18, 20, and 23; Dr. A. C. Haddon for Figures 31 and 36; W. Heinemann, Esq., for Figures 7 and 14; and Dr. M. Aurel Stein for Figures 15 and 17. Without their generosity the least known parts of Asia could not have been illustrated.

OXFORD, *August*, 1909.

BANGALORE-1,

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BANGALORE

CHAPTER I

THE SEAS AND LANDS OF ASIA

1. The Map of Asia. Look at the coloured map of Asia. The blue part shows the sea. The rest is land. The land coloured light brown is over 1,500 feet high. 1,500 feet is more than a quarter of a mile. The dark brown land is over 3,000 feet, or more than half a mile, high. Much of it is over a mile high, and the highest parts are over five miles high.

2. The Seas of Asia. Most of the seas of Asia belong to the Indian and Pacific Oceans. The principal seas and gulfs are marked on the map.

3. The Lands of Asia. These seas cut the land into many islands and peninsulas. An island is land quite surrounded by water. A peninsula is almost an island, but is joined on one side to the mainland.

The largest peninsulas of Asia are on the south, separated by gulfs of the Indian Ocean. Look out the Arabian, Indian, and Malayan peninsulas. Round the latter lie many large islands. They form the Malay Archipelago. Look out Borneo, Java, and Sumatra.

The peninsulas of Eastern Asia are much smaller. Look out Kamchatka and Korea. Notice the long chain of the Japanese islands fringing the Japanese Sea.

The great peninsula of Asia Minor projects from Western Asia far into the Mediterranean. Off it lies the large island of Cyprus.

Notice that the coasts of Asia and Africa almost touch at the southern end of Arabia, where the Red Sea narrows to the Strait of Bab-el-Mandeb. The entrance is guarded by Aden in Arabia, which is held by Britain. It is very strongly fortified.

The eastern shores of Asia are only a few miles distant from the western shores of North America. A narrow strait separates the Old World from the New. You will see this on the globe.

4 The Influence of the Sea. The cutting-up of the land by the sea gives Asia a long coastline and many harbours. It reduces the distance of the interior from the sea. Asia, however, is so vast, and its mountains are so high, that the interior is not much affected by the sea. It has a dry and very extreme climate. (See vol. i, §§ 26, 27.)

5. The Isthmus of Suez. Europe and Asia make one great continent, often called

Eurasia. Eurasia is almost completely cut off from Africa. The narrow isthmus of Suez unites the two. It forms a barrier between the Mediterranean and the Red Sea. Ships

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FIG. 1. THE SUEZ CANAL

Notice the desert character of the land on both sides of the canal.

bound for the Asiatic seas had formerly to sail right round Africa. Look out their route on the globe. Sailing ships still follow it.

The isthmus of Suez is narrow and low. Some lakes formed part of it. It was not very difficult to cut a canal across it to unite the

two seas. The Suez canal was cut about fifty years ago. Steamers now sail from the Mediterranean through the canal into the Red Sea.

6. The Land Boundary. On the west, Asia is continuous with Europe. The land on both sides is similar. The people are of the same race.

7. The Vast Size of Asia. Find Asia on the globe. Notice that it extends much nearer the pole than does Europe. It also extends much farther south than Europe. Europe lies considerably north of the northern tropic, which crosses the southern peninsulas of Asia. The equator crosses the islands of the Malay Archipelago. The southern lands of Asia are far hotter than the hottest parts of Europe.

The globe shows you how small Europe is in comparison with Asia.

8. Mountain and Plain. Notice how much of Asia is coloured brown in your map. The northern plains are cut off from the southern plains by a very broad belt of high ground. This runs right across Asia from the shores of the Mediterranean to the shores of the Pacific. The high plateaus of Asia Minor and Iran separate the Black and Caspian Seas from the Mediterranean and the Indian Ocean. East of Iran there are high mountains con-

sisting of many parallel ranges. These are separated by high, bleak plateaus, or by deep, inaccessible river valleys.

These mountains have many names, but they all form part of the great belt of high ground which extends across Eurasia from the Atlantic to the Pacific. This whole belt is sometimes called the Mid-World Mountains.[1]

Exercises[2]

1. Why is the Red Sea important?
2. With what places in Europe would you compare Aden? Give your reasons.
3. Why is Aden now more important than ever before?
4. Name the largest islands of the Arctic Ocean.
5. Write down the name of some of the inland seas of Asia.
6. Draw a map of the different countries of Asia.
7. Which country of Asia has the largest plains?
8. Which countries of Asia look as if they had no plains at all?
9. Which countries have no sea coast?
10. What strait separates India from the island to the south? Name the island.
11. What strait separates the Old World from the New World?
12. Draw or trace a map of Asia and mark the chief gulfs. Darken the mountain belt.

[1] It is well to read § 197 here.

[2] Use a globe and the coloured maps.

CHAPTER II

THE STEPPES OF ASIA

9. The Dryness of Asia. In Europe we began with the high Alpine valleys, where man can just manage to live, and traced the Alpine rivers down to the rich lands bordering the oceans. In Asia we shall begin with the dry regions where the rivers lose themselves in the deserts and where man and beast are always faced with the danger of famine through want of water.

In Asia, except in the Monsoon lands (§§ 132–196), we shall constantly come back to this scarcity of water, and to the methods by which man has tried to overcome it. Want of water is the reason why the same kind of life is lived over a great part of Asia.

10. Map Studies. Look at the coloured map of Asia. Vast plains lie north of the Mid-World Mountains and stretch to the Arctic Ocean. They form part of the great plain of Eurasia which extends from the Atlantic almost to the Pacific across Europe and Asia.

A horseman might leave the Danube at the Iron Gates and ride east across the level wheat-growing steppes of Rumania.

Keeping north-east round the northern shores of the Black Sea he would ride across the grass lands of Southern Russia. In time he would reach and cross the Volga. Endless brown or green plains would still lie before him. To avoid the deserts round the Caspian Sea he would not ride too far to the south. Nor would he ride too far to the north, for he would not wish to climb the forested slopes of the Ural Mountains. Thus he would pass into Asia, but without any change in the landscape. Endless plains would still stretch before him. For days and weeks he would ride thus, letting his horse crop the abundant grass. His journey would not end till he saw in the distance the blue mountains of China.

11. What the Steppe is Like. Such a ride shows how vast the steppes of Asia are. What is this immense region like?

The steppe is almost treeless. There is a good reason for this. The summers are very hot and the winters are bitterly cold. The climate is very dry. This is owing to the great distance of the steppes from the sea. (See vol. i, § 27.) The growing time of plants is very short. It lasts only from late April, when the snows melt, to the fierce heats of July. Plants must grow quickly and ripen

their seeds in a few weeks. Grass can do this. If you have sown grass seed in spring you know how soon the place is green. You see the same thing in the hay fields every summer. The grasses and meadow flowers are soon a foot or more high. Before the farmer is ready to cut them they have dropped their seeds into the ground for next year. Trees, on the contrary, grow slowly. A seedling tree is only a few inches high at the end of its first summer and it has made no seeds at all. This is why there are no trees in the steppe. Their seeds are often carried thither by the wind. In spring they begin to grow, but the grass grows faster. The tiny trees are soon buried in a sea of grass. In July come scorching suns, and in autumn biting frosts. Hardly any trees live through their first year.

12. The steppes are generally treeless, but they are not always level. Most of the Asiatic steppes belong to the plain of Eurasia, but in many parts they are hilly.

13. The Seasons in the Steppes. When the snow melts in April the steppe is a sea of mud. This is very good for the seeds, which need moisture, but it makes the steppe brown and ugly. The seeds grow very quickly in the soaking soil. The whole steppe is soon

a fresh and lovely green. Day by day the colour becomes richer. There are sheets of crocus, tulip, and hyacinth. There are lilies of every shade. Our Lord was thinking of

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FIG. 2. SPRING IN THE STEPPE

This picture is taken in the steppes of Palestine. It shows the beauty and abundance of the spring flowers. Notice also the shepherd and his sheep.

this wonderful spring picture in the steppes of Palestine when He told His disciples that the lilies were more splendid than a king's robes.

14. Spring passes quickly. In a few weeks the grass and flowers are as tall as a man. The

scorching suns of summer soon turn the grass brown. The flowers fade. The rivers and wells run dry. There is no shade. The sun rises and sets like a ball of fire. Man and beast desire above all things water and shade.

In winter the steppes are buried in snow. Biting winds sweep over them. Blinding snow-storms make it difficult to go from place to place. In a treeless region there are few landmarks. Every road is buried. Men and beasts lose their way and are frozen in the deep drifts.

15. From Steppe to Desert. The steppes are dry everywhere. Most of their moisture is obtained from the melting snow. Some parts are much drier than others. There are vast stretches of sandy and stony waste. There are salt deserts which sparkle like snow in the sun. There are regions which are neither true steppe nor true desert. The plants are few in number, and grow far apart. They are dry, thorny, and brown. Such dry regions, where plants struggle hard for life, are sometimes called poor steppes, or scrub lands.

16. The poor steppes and the deserts need water to make them fertile. Sometimes they can be irrigated from the rivers. (See § 38.) Then oases are formed which men can cultivate.

Exercises

1. Why are steppes treeless? In what part of a continent are they found?
2. Describe the seasons in the steppes.
3. Write down any words from the Bible which make you think that the writer lived in a steppe land.
4. What animals would you expect to find in the steppes?
5. What kind of work could best be done in the steppes?
6. What kind of houses would men use in the steppes?

CHAPTER III

LIFE IN THE STEPPES

17. The Steppe Peoples. People of different races live in different parts of the grassy steppes. Among the most powerful tribes are the Kirghiz. They live in the Kirghiz steppe, between the Aral Sea and Lake Balkash. Look out the Kirghiz steppe in your map. It is a continuation of the grassy steppes of Russia.

18. The Animals of the Steppes. The Kirghiz live by feeding immense flocks and herds on the grass of the steppes. They value their horses most. A rich man reckons his wealth in horses. Very rich men own

thousands. Even poor men have enough for their families to ride. There is no poverty so great in the steppes as having no horse.

19. Sheep and goats come next in value. There are not many cattle in the steppes. In a dry climate cows give hardly any milk, and are not worth keeping. Sheep and goats are much hardier. They can crop short dry grass and the plants of the salt steppes. A dry climate improves their wool and hair. In all dry climates sheep and goats are commoner than cattle.

20. Camels can eat thorny plants, which grow on the edge of the desert. They can make long marches without food and water.

21. The Wandering Life. As soon as the steppe becomes green in spring the Kirghiz turn their animals out to graze. The horses and camels are sent first into the longest grass. When they have eaten it down, sheep and goats take their place. These nibble it down to the very roots. Sooner or later all the grass is eaten bare and a move must be made.

22. This is why the steppe dwellers build no towns. They have to live as wanderers on the face of the earth. They must have houses which can easily be moved from place to place. A tent is a house of this kind.

23. The Kirghiz Tent. All steppe dwellers live in tents. A tent is easily carried, and can be put up and taken down when wanted.

24. The framework is a kind of wooden lattice which folds together when not in use. When the tent is to be put up the lattice is pulled out into a round shape. This framework is covered with thick sheets of felt cut to shape. These are fitted together, and the whole is kept in place with ropes. The inside is made comfortable with rugs and carpets. These are very valuable, and are handed on from father to son.

25. A windowless tent sounds dark and gloomy. Do not forget that it is meant chiefly for summer use, when the steppe is flooded with scorching sunshine. There are no trees to make a shade. The darkness of the tent is a welcome relief from the glare outside.

26. On the Move. Suppose that it is time to make a move. The horses and camels go first, cropping all the way. Mounted men ride with them. If an animal strays a Kirghiz rides after him, carrying a long noose or lasso of cord or leather. This he throws with great skill and catches the runaway without hurting it. The sheep and goats with their lambs and kids follow the larger animals. They also

crop as they go. It is a slow way of travelling. The day's journey is never very long.

27. When the men and animals have started the women prepare to move the tents. They fold the rugs and carpets. They loosen the ropes and take down the sheets of felt. They fold up the wooden framework. They collect the leather bottles and other belongings. All these are made up into loads and piled on horses or camels. Then the women and children mount their horses and ride after the men and animals. Before long they overtake them. A halt is made at noon. The animals are milked into leather bottles. After a rest they start again. At night the tents are set up. The animals are milked again and the day's work is over. If there is plenty of grass a halt lasts some days.

28. The steppe dwellers have to plan their movements carefully. In spring they go to the lower plains. Later they move towards the higher parts of the steppes, where the snow melted later. Here the grass is still young and fresh. In autumn they return to the plains, which are warmer. Each tribe has its own grazing grounds. The older men know where their rights begin and end, and are careful to observe them.

Fig. 3. Kirghiz Tents

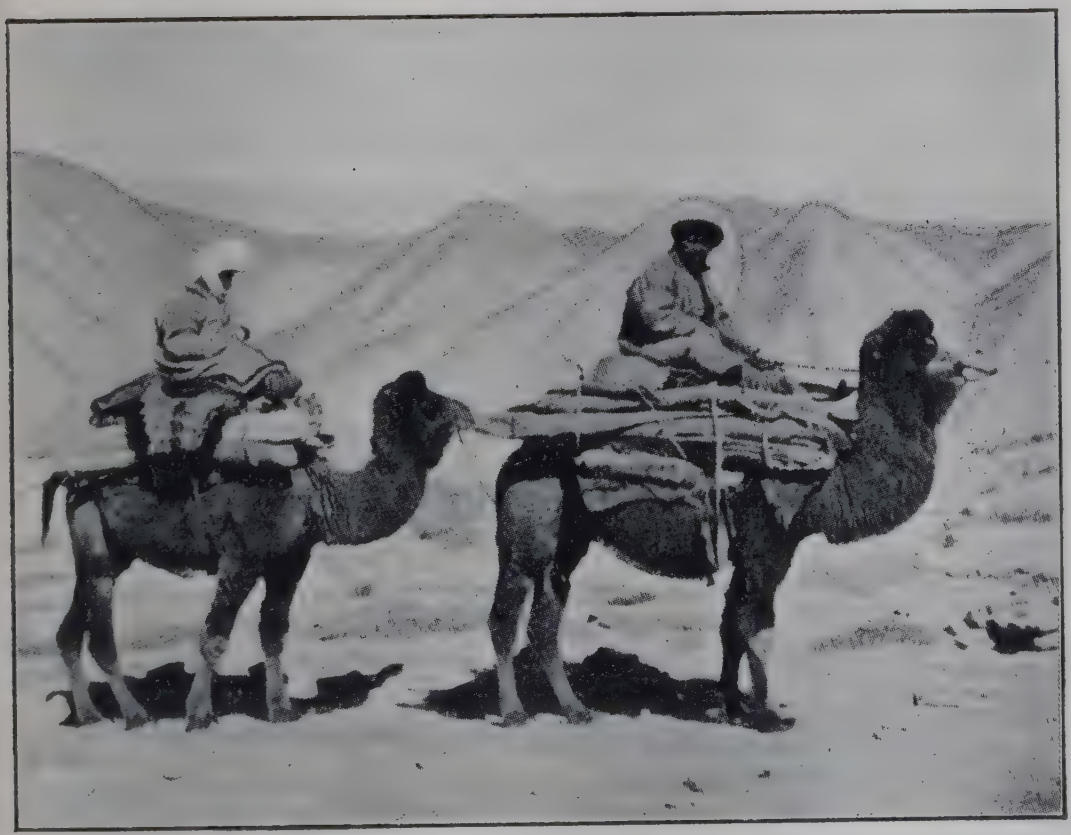

Fig. 4. Kirghiz on the Move.
This picture is taken in the drier steppes where camels are used instead of horses.

29. The Food of the Kirghiz. In summer the Kirghiz live on milk. Much is made into butter and cheese, and into a kind of curd. In this way it can be stored for use in winter, when milk is scarcer. Mares' milk is made into a kind of milk wine called koumiss. This is the greatest delicacy which a Kirghiz can offer to a guest.

In summer meat is hardly ever eaten. In winter it is often used. The animals are less valuable then, partly because they are not giving much milk, and partly because it is difficult to feed them. Horse flesh is the favourite and most costly meat. The fat of meat is preferred to the lean. Horse fat is smoked and made into sausages. These are kept for great occasions.

30. The Kirghiz and their Herds. Food is not all that the Kirghiz get from their herds. Camels' hair is made into soft fine rugs. Little babies are wrapped in these warm cosy coverings. Sheep's wool is pressed into felt and makes coverings for the tents. Sheep-skins, with the wool left on, are made into coats for winter wear. The skins of lambs make the curly Astrakhan fur which we all know. Much wool is woven into carpets and rugs. These are famous for their beautiful

patterns and colours. The best last more than a lifetime. The long hair of the goats is made into fringes and tassels. Horses' manes and tails are plaited into cords and lassoes. All kinds of skins are tanned into leather to make saddles, bridles, bottles, bags, and other necessary things. The very droppings of the animals have their use. They are collected, mixed with straw, and burned in winter. Wood is very scarce on the steppe.

31. Steppe Life in Winter. In winter the ground is either bare and brown, or white with snow. It affords neither food nor shelter. As the days get shorter and colder the Kirghiz make their way back to their winter quarters. These are generally in the valleys. Valleys afford more shelter than the open steppe and they provide water. The grass has been left for winter use. It is dry but eatable. The hay and droppings collected in summer are brought to the winter camping grounds.

Even in winter the Kirghiz generally prefer to live in tents. Some build wooden huts, but these are not nearly so warm and snug. The animals are housed in pens and shelters. If the winter is mild all goes well. If it is hard many animals die of cold and hunger.

32. The winter days pass busily. Men and

women make rugs, clothes, felt, saddles, and other things which will be wanted in spring. Story-telling and singing pass the long evenings. It is not unlike the winter life in Russian or Alpine villages.

33. This wandering life is found in all the steppe lands of Asia. It is the only possible one.

34. The Scanty Population of the Steppes. The steppes can never be very thickly peopled. Every family needs a vast amount of land to feed its flocks and herds. If the grassy steppes could be farmed they would feed many times the present number of people. In parts this is possible (see §§ 74, 75), but most of the steppes are too dry.

35. Bible Pictures. Our Bible gives us many pictures of life in the steppes of Palestine. The people of Israel were led out of the desert into a land flowing with milk and honey. The steppe certainly flows with milk. It flows with honey too, for swarms of bees hover round the flowers in spring and summer.

You will find many descriptions of tent life in the Old Testament. The patriarchs moved from place to place with their flocks and herds. The House of God itself was a tent for centuries. In the Bible you will find many descriptions of the beauty of the steppes in spring.

Water and shade are spoken of as the greatest blessings in life. Our Lord calls Himself the Good Shepherd, the most beautiful character the steppe dweller can think of.

Exercises

1. Why do the steppe dwellers lead a wandering life? How does this affect their houses?
2. How does the steppe dweller obtain all he needs from his flocks?
3. Why do the Kirghiz use milk rather than meat?
4. How does the steppe dweller make provision for winter?
5. Why does the Kirghiz use such strange fuel?
6. Read the twenty-third psalm and show how it reminds you of the steppes.

CHAPTER IV

THE DRY STEPPES AND THEIR OASES

36. Map Studies. On the south the grassy Kirghiz Steppe passes into the dry region of Turan. Find Turan on your map. It lies between the Caspian and Aral Seas and the Mid-World Mountains. It forms part of the Russian province of Turkestan.

The mountains which shut in Turan on the south have many names, but they all belong to the Mid-World Mountains. In the west they rise to the plateau of Iran, which is

divided politically into Persia and Afghanistan. The mountains of Afghanistan are continued by the great Hindu Kush, which cut Turan off from India. The glaciers of the Hindu Kush feed the Oxus, or Amu. (See § 113.) The Oxus flows across the low plains of Turan to the Sea of Aral. The same sea receives the Syr from the Tianshan Mountains. The Tianshan continue the Hindu Kush north-eastwards and separate the deserts of Russian Turkestan from those of Chinese Turkestan.

37. Russian Turkestan. Russian Turkestan is a desert with a few oases where valleys open from the mountains. These are irrigated by the rivers which flow from Iran, the Hindu Kush, and the Tianshan. Wherever water is brought a green oasis breaks the brown of the desert. The traveller passes at a step from bare sands into green fields and shady orchards. If water is abundant the oasis may be a large one, containing many villages and at least one great city. The oases are separated by wide stretches of waterless desert. One may ride for days and see no sign of life except an occasional train of laden camels carrying goods from one oasis to another.

38. An Oasis in Russian Turkestan. All these oases resemble each other. The first

FIG. 5. AN OASIS IN THE DESERT

This shows a small oasis in Iran. The oases in Turan are of the same type.

thing the traveller notices is the network of irrigation canals. Wide canals are cut from the river on both sides. At first these run parallel to each other. Then each breaks up into smaller and smaller canals till the water is exhausted. When enough water has passed through for one day the canals near the river are closed.

39. All the oasis towns have high walls and gates. The streets are narrow, to give as much shade as possible. The houses have flat roofs, because little rain or snow falls. Both houses and walls are built of dried mud. Building is a simple matter. The soil is mixed with straw and soaked with water from a canal. It is shaped into bricks, and these are set to dry in the sun. They are soon as hard as stone and last almost as long in a dry climate. The streets are not paved. In summer they are inches deep in dust. A fall of snow or a shower of rain makes them into a sea of mud.

40. All the streets lead to the bazar. This is the gathering-place for all who have business to do or news to tell. It consists of rows of windowless shops. An awning is stretched overhead from side to side to keep off the sun. All the shops of one kind are together. Goods from all the surrounding countries are on

sale. There are many kinds of cooked food, and sweetmeats made of honey from the steppes. (See § 35.) Beautiful rugs and embroideries can be bought. One merchant sells only vessels of beaten brass. Others offer jewellery made from the gold and precious stones found in the Mid-World Mountains. Some traders sell fruit grown in the oasis. Others show goods made in the distant Russian factories. These are packed in beautifully ornamented boxes which are also offered for sale. Some of these things have been brought by rail. Many are still carried by camels across the desert.

41. The Fruits and Trees of an Oasis. In the new Russian quarters the streets are planted with poplars. The willow is the favourite shade tree in the native villages. In all the oases mulberry trees are grown. Millions of silkworms are fed on their leaves. The silk of Turkestan has always been famous. Walnut and pistachio trees are grown for their nuts, which are made into sweetmeats. The vine is grown over trellises in every garden. The grapes are dried in the sun on the flat roofs of the houses. The apricot is dried in the same way. Figs, melons, pomegranates, peaches, and even pears and apples, are

grown. Fruit, fresh or dried, is the chief food of the people, who cannot get much milk or meat.

42. Other things are grown as well as these delicious fruits. Rice is cultivated in flooded fields. Sesame, a name we remember in the *Arabian Nights*, is grown for the oil in its seeds. This is used in cooking. The most important crop is cotton. Turkestan is one of the great cotton regions of the world. It feeds the factories of Moscow and other Russian towns. The crop is gathered by women and children and taken in sacks to the bazar by the men. Thence it goes by rail or camel to Russia. The seeds are crushed for oil, which the poor use for cooking and in lamps. The refuse makes camel food.

43. The Cities of Turkestan. Many of the oasis towns have a long history. Their fertility made them rich. Trade and industry enriched them more. They lay on the only possible routes across the desert. All the merchandise of east and west passed through their bazars. Their wealth was their ruin. Conquering armies besieged them for the sake of their treasures. The people were put to the sword and the city was left in ruins. Sooner or later a new city was built out of the ruins

of the old. It too became great and rich, and met the same fate. Nearly all the cities of Turkestan are surrounded by the ruins of older cities.

44. The last conquerors were the Russians. They are wiser than the earlier conquerors. They have left the historic buildings they found, and have built new ones. Instead of destroying the irrigation canals, they have made new ones. Their conquest has brought prosperity instead of ruin.

EXERCISES

1. What is an oasis? How is it formed?
2. Describe an oasis in Russian Turkestan.
3. Why is mud used for building in Russian Turkestan?
4. Write down any texts from the Bible which show that the writers lived near the desert.

CHAPTER V

THE TRANSCASPIAN RAILWAY

45. The Transcaspian Railway. One wise act of the Russian conquerors was to build a railway across the desert from oasis to oasis.

46. The Transcaspian line starts from a town on the eastern shores of the Caspian

Sea. This town is built in a dry region where not a blade of grass grows. All the water needed in the town and for the railway engines is distilled from the salt waters of the Caspian.

The train plunges into the desert which stretches as far as eye can see. Far to the south on the horizon are the distant blue peaks of Persia. At long intervals an oasis is reached and passed. One of the most famous is Merv, which lies amid the ruins of older cities. Merv owes its existence to the waters of the Murghab. The valley of this river leads far into the mountains of Afghanistan and is one of the roads to India. (See § 93.) The Murghab spends itself in fertilizing Merv and runs dry in the desert beyond.

47. After leaving Merv the line turns farther from the mountains and strikes east across the desert. The moving sands are always threatening to bury the line. To prevent this the Russians have planted hedges of a brown leafless desert shrub called saxaul. The hedges hold back the drifting sands and save the railway. The line draws near to the Oxus and crosses an oasis irrigated from the river. A steel bridge carries the train over the muddy river and on into the desert. Soon the traveller is in Bokhara.

FIG. 6. A GATE IN BOKHARA

This picture shows how imposing mud walls and gates may be made. Notice the beautiful tracery in the windows and the ornamentation of the roof. The picture also shows the kind of dress worn

48. Bokhara 'the Noble'. Bokhara owes its existence to the river Zerafshan, which rises in the glaciers of the Tianshan. The river has already fertilized many miles of valley and a great city before it reaches Bokhara. At Bokhara it is a mere network of canals. Below the city it runs dry. Bokhara is a great centre of Mohammedan learning and has many mosques, or Mohammedan places of worship. Though built of mud bricks many are beautiful and imposing.

49. Samarkand. Higher up the valley is the great oasis of Samarkand, which is taking more and more water from Bokhara. It has splendid mosques and palaces roofed with exquisite blue tiles. From the roofs of these can be seen far below the squares and bazars of the busy city. On the horizon are the snowy peaks of the Tianshan.

50. Ferghana. Beyond Samarkand the line follows the fertile valley irrigated by the Zerafshan. Cotton is grown everywhere. A branch line goes off to the oases of Ferghana, a cotton-growing region lying between ranges of the Tianshan. Town succeeds town on the main line. The train crosses the Syr and reaches Tashkent, a modern Russian town. The Russians have built a railway from

Tashkent to join the great line which runs from Moscow across Siberia. (See §§ 73-7.)

Exercises on Chapters IV and V

1. Why are the oases of Turkestan found near the mountains?
2. Why are there so many ruined cities in Turkestan?
3. Why was a railway needed in Turkestan?
4. What were the chief difficulties in making a line? Do you know how any of them were overcome?
5. Draw a map of the Transcaspian line, marking the chief towns and the rivers crossed.
6. Why are the Russians paying so much attention to the cultivation of cotton?

CHAPTER VI

THE DESERTS AND OASES OF CHINESE TURKESTAN

51. Across the Tianshan. From the cotton-growing oases of Ferghana traders cross the high passes of the Tianshan to the oases of Chinese Turkestan. The journey takes a horseman many days. The lower slopes and valleys of the Tianshan are covered with forests. Above these are grassy slopes and pastures, where wandering Kirghiz feed their herds. Still higher only rock and snow can be seen. At last the top of the last pass is reached. The track begins to descend. It

follows the rough valley of a little stream which is flowing down to Chinese Turkestan. The stream has to be crossed and re-crossed many times. The traveller descends at last to grassy slopes like those he left behind on the other side. Below these he comes to more forests. After many days he finds himself in sight of the walls and orchards of Kashgar. Beyond is the yellow-brown desert.

52. Map Studies of Chinese Turkestan. Chinese Turkestan is shut in by a horse-shoe of high mountains. On the north these are called the Tianshan. On the south they are called the Kwenlun Mountains. These take all the rain out of the winds, and leave none to fall on the deserts below. Their great glaciers and snow fields feed many streams. These flow to the Tarim, the only long river of Chinese Turkestan. The only fertile spots in Chinese Turkestan are the oases which these rivers irrigate. All along the base of the mountains, wherever a valley opens, there is a fertile oasis. Long miles of desert separate it from its next neighbour. This reminds us of Russian Turkestan.

53. Routes across Chinese Turkestan. Much of Chinese Turkestan is a desert of moving sandhills. Travellers have to make their way

along the base of the northern or southern mountains where the oases furnish water and supplies. The northern route follows the oases at the base of the Tianshan. The southern route goes by the oases at the base of the Kwenlun.

54. The Tarim. Without its mountain streams Chinese Turkestan would be an uninhabited desert. Many rivers run dry in the oases which they irrigate. Only the largest reach the Tarim. The Tarim is longer than the Danube, but it carries little water except when the snows melt. In winter it is frozen. Most of its course is through a sandy desert. In some parts a few hunters, fishers, or shepherds are found. They live in reed huts and feed a few camels on the dry, thorny bushes which grow near the river. The Tarim loses itself in the great swamps of Lop Nor.

55. Kashgar. Kashgar is the first place reached by the traveller from Russian Turkestan. It consists of two large walled cities. On three sides it is shut in by snowy peaks. On the fourth it looks to the desert which stretches east for two thousand miles. Kashgar is made fertile by a network of irrigation canals, which are fed from a tributary of the Tarim. Its orchards produce all the fruits and

plants of Central Asia. Apricots and peaches, fresh or dried, are the commonest food.

Kashgar reminds us of the oasis cities of Russian Turkestan. It has the same flat-roofed houses built of mud. The narrow, dirty streets are crowded with camels and donkeys. Caravans are always coming and going across the desert. The bazars are the centre of trade and gossip.

Kashgar is made important by its position. Many routes of Central Asia pass through it. In its streets you meet men from all parts of Asia. There are Chinamen who have come three thousand miles across mountains and deserts. There are Hindus who have travelled for weeks across the passes of the mountains which separate the two countries. There are Afghans who have come down from their mountain land, crossed the deserts of Russian Turkestan, and climbed the passes of the Tianshan. There are Russians who have come farther still.

56. Yarkand. The river which waters Kashgar is one of many streams which flow from the Tianshan to the Tarim. The valleys of these streams lead to the passes by which the mountains must be crossed. An important tributary of the Tarim from the Kwenlun is

Fig 7. The Lop Nor Desert

the Yarkand. It irrigates the oasis of the same name. Yarkand is a second Kashgar. It is the starting-point for the route by the oases at the base of the Kwenlun. These bring travellers to the plateau of Mongolia. It is also the starting-point for a long and very difficult route into India. (See § 121.)

57. Mongolia. The plateau of Mongolia rises above the desert of Chinese Turkestan. It too is shut in by high ranges of mountains which take nearly all the rain from the winds which strike them. On the north these mountains descend through lower ranges to the plains of Siberia. On the south they rise to the Kwenlun which border the still higher plateau of Tibet. (See ch. xiii.)

58. About a quarter of Mongolia consists of the waterless desert of Gobi. The rest is a steppe region, which is fertile in spring. Wandering Mongolians move their tents from place to place, and lead the pastoral life of all steppe peoples. Horses are kept in the better parts. Camels are found where dry, thorny plants grow. Sheep are kept in great numbers. The population of Mongolia is very small for the size of the country.

59. The Oases of Mongolia. Mongolia is very like Russian and Chinese Turkestan.

It has irrigated oases at the base of the mountains. None of these are very large or important. The caravan routes avoid the desert by passing from oasis to oasis.

60. In the east the Mongolian plateau rises to the mountains of China. Beyond these lie fertile plains and river valleys. The Great Wall of China was built long ago by the Chinese along the crest of these mountains. It formed the boundary between the settled Chinese farmers and the pastoral tribes of Mongolia.

EXERCISES

1. How is Kashgar reached from Samarkand? Why is it important?
2. Compare Russian and Chinese Turkestan.
3. What is meant by a pastoral people? Why do they invade cultivated lands?
4. Why is the population of Mongolia so small?

CHAPTER VII

SIBERIA

61. Map Studies. Look at the coloured map. Siberia includes most of Asia north of the Mid-World Mountains and Russian Turkestan. It is highest in the south. The Siberian rivers flow to the Arctic Ocean. Find on the

map the Ob in the west, the Yenisei in the centre, and the Lena in the east.

62. The Siberian Rivers. Trace the course of the Ob. The main stream is fed by the snows and rains of the Altai Mountains, which separate the plains of Siberia from Mongolia. It makes its way down in gorges and steep valleys until it reaches the plains to the north. Its greatest tributary is the Irtish, which rises high among mountains farther to the west. The Irtish valley separates the westernmost ranges of the Altai from the easternmost ranges of the Tianshan. A great tributary, the Tobol, flows to the left bank of the Ob from the Kirghiz Steppe. Several tributaries come from the forested Urals. The Ob carries to the Arctic Ocean moisture which has fallen on mountain slopes thousands of miles apart.

63. Notice in the map that the valleys of the Siberian river tributaries form routes to the east. A boatman with a light canoe could make his way from the frontiers of Europe far into the heart of Asia. The most easterly tributary of the Ob rises only a few miles from the Yenisei, the second great Siberian river. The boatman need not carry his canoe far to launch it on the Yenisei.

64. The Yenisei rises in the mountains which separate the Siberian plains from the deserts of Mongolia. The mountains are really part of the Altai, though they are known by different names. By following an eastern tributary, our boatman would reach the great fresh-water lake of Baikal. This beautiful mountain lake receives rivers from the high edges of the Mongolian plateau. Some of them rise near streams which flow down to the oases of Mongolia.

65. From the northern shores of Lake Baikal our boatman would carry his canoe to a tributary of the Lena. The Lena and its tributaries would take him still farther east. The easternmost tributary of the Lena rises in the high plateau which overlooks the Sea of Okhotsk. In this way a canoeman might make his way, with one or two short portages, from the frontier of Europe to a point almost within sight of the Pacific.

66. The early Russian explorers travelled in this way. They were fur-traders who pushed their canoes up river after river. They reached the Pacific three centuries ago.

67. Few countries have finer rivers than Siberia. If they flowed to a busy sea they would be of enormous value. Instead of this

they flow to the Arctic Ocean, which is frozen for many months. Compare this with the value of rivers flowing to such a sea as the Mediterranean. The Siberian rivers are frozen for many months. The ice does not break up till spring. Terrible floods follow the spring thaws. The rivers spread over the flat country, and become as broad as lakes. The busy season is between the going down of the floods and the beginning of the autumn frosts.

68. The Siberian Climate. Siberia has a very extreme climate. Its summers are hot and its winters are very cold. The influence of the sea is not felt. The great land mass of Europe lies to the west, intercepting all winds from the Atlantic. High mountains to the east cut off winds from the Pacific. Still higher and broader mountains to the south prevent southerly winds from being felt. Only on the north does Siberia lie open to the sea. The winds from this frozen sea are very cold.

The winter days are very short in Northern Siberia. The summer days are equally long. These long summer days enable wheat to be grown farther north than we should expect. The almost continuous daylight makes the ripening period a short one.

69. The first explorers of Siberia suffered terribly in the cold winters. They brought back stories which made Russians dread the name of Siberia. No one thought of attempting to colonize such a country. A few thousand criminals were sent there as a punishment. Their friends were allowed to follow them. In this way a number of settlements grew up. In the latter half of the last century more and more emigrants sought their fortunes in a country where land was abundant and cheap. These new lands often proved to be very fertile. Before the end of the last century Siberia was dotted with scattered villages and farms.

70. Roads were gradually made between the larger settlements. The Trans-Siberian line, which connects Moscow with the Pacific, was begun in 1891. It is 6,000 miles long, and it was finished in ten years.

The railway brought many new settlers. Emigrant waggons still make their way slowly across the Siberian steppes, but far more settlers travel by the train. The railway brings the machinery needed for ploughing and for other kinds of work. It also carries the produce of Siberia to markets where it can be sold.

71. Siberian Towns and Villages. A Siberian village is not beautiful. The houses

are built of rough logs. Moss and earth are forced into the joints to keep out wind and weather. The bare rooms have hardly any furniture. The peasants wear cotton blouses in the fields. In winter they wear thick sheepskin coats.

The towns are not much more imposing. Few houses are built of stone. The streets are unpaved. In winter they are deep in mud and slush. The only important buildings are the churches and the government offices. The streets are often lighted by electric light. There is some gaiety mixed with much discomfort. In a few cases the larger towns have been partly rebuilt as fine cities.

Towns spring up very quickly near the railway. To-day there are good-sized places where not a house stood twenty or thirty years ago.

72. What Siberia is like. So vast a country is very different in different parts. Part of it is desert, part is steppe, part is forest and part is tundra. Round Lake Balkash is a region which differs little from Turan. The irrigated oases in the Ili valley resemble the oases of the Zerafshan. The Ili valley forms an important route into Chinese Turkestan.

73. The Trans-Siberian Line. The south-western part of Siberia consists of the grassy

FIG. 8. IRKUTSK CATHEDRAL

FIG. 9. A SIBERIAN VILLAGE

steppes. Travellers by the Siberian line see the same monotonous landscape for hundreds of miles after leaving the frontier station. Grassy plains extend as far as eye can see.

74. In this steppe region great changes are taking place. Russian emigrants are ploughing up the grassy steppes and planting wheat and other crops. The climate suits wheat well. In spring the ground is soaked by the spring thaws. The hot dry summer ripens the grain. More and more wheat is grown every year.

75. The main line passes through Omsk, the largest town of the steppes. Other important cities of Western Siberia are Tobolsk, finely placed on the high bank of the Tobol, and Tomsk, built where the Ob receives a tributary. Neither of these is on the main line. Tomsk is the centre of a gold-mining region.

The line crosses the Ob by a long bridge. Soon after it enters the forest region. This stretches across Siberia north of the steppes from the Urals to the Pacific. It is a continuation of the forests of Russia. Sometimes the line passes through small clearings, where a few log houses have been built. Some wheat is grown in these clearings and cattle are grazed. Siberia sends much wheat, butter, and cheese to the markets of Europe.

76. It is more than a thousand miles from the Ob to Lake Baikal. During the last part of the journey the line rises steadily, curving round one forested hillside after another. The train crosses the Angara river and pulls up at Irkutsk. This is the largest town in Eastern Siberia. It has fine shops, churches, museums, theatres, technical schools, gold-smelting laboratories, and other public buildings.

77. About forty miles after leaving Irkutsk the train reaches Lake Baikal. Before the line round the lake was built passengers had to cross in steamers. The line is next carried over the wooded slopes of the lower ranges of the Altai. At last it reaches the Amur, the great river of Manchuria. It crosses the forests and steppes of this fertile region to Port Arthur, which is held by Japan. The Russian terminus is at Vladivostok, a fine harbour on the Pacific.

This long journey takes many days by train. It gives us some idea of the size of Siberia from east to west, and it shows us the vast extent of the steppe and forest regions.

EXERCISES

1. How are the steppes changing in Siberia?
2. Will this make any difference to the kind of life?
3. Draw a map to show the route followed by the Trans-Siberian Railway.

CHAPTER VIII

THE FORESTS AND TUNDRA OF SIBERIA

78. Across the Siberian Forests. If we sailed in summer down a Siberian river we should see how vast the Siberian forests are. Day after day the boat passes northwards between forested banks. The trees are of many kinds. Evergreens are mixed with birch and beech. Very little of this vast forest has ever been trodden by man. The ground is often swampy and marshy. The trees grow very thickly. Young trees are sprouting everywhere. Fallen trunks are wedged between standing trees, jammed a few feet above the ground. The only easy way into the forest is by canoe.

79. Many fur-bearing animals live in the forests. Winter is the best season for hunting them. The snow hardens the ground and makes it level. Even in winter, however, the hunters never venture far from the main rivers.

80. Life in the Forest Region. The villages in the forest region are few and small. They are always built by the rivers. The houses are wooden huts, covered with turf. The people live by grazing a few animals, fishing in the rivers and lakes, and hunting in the forests. This supplies them with meat.

The bark of the pine tree is ground for flour. A common dish consists of meat, fish, roots, grass, and pine bark stewed in skim milk into a kind of porridge. The women work very hard. They set up the tents when a move is made, gather and chop wood, get ice and melt it for water, cook, mend, and help with the hunting and fishing.

81. The Tundra. We might sail down the Lena for hundreds of miles through the forest. Yakutsk is the only large town. The river becomes very wide. The Lower Lena is more than fifteen miles across.

Gradually the woods become thinner. The trees grow smaller. The pine is seen no more. The spruce disappears. The beech and birch become mere bushes. Still farther north even these bushes disappear. The river has passed into the treeless tundra, where the ground never thaws more than a few inches. Signs of human life are rare.

82. All the tundra tribes live a wandering life. Some come as much as a thousand miles from the forests far to the south. In spring they follow the wild reindeer north, and drive their own tame reindeer to fatten on the reindeer moss. Others catch the salmon which come in millions up the rivers from the sea.

83. The reindeer are very valuable. They pull or drag loads across the frozen ground. This helps their masters to move easily to fresh hunting or fishing grounds. The reindeer supplies milk in summer and meat in winter. Its young constantly increase the wealth of the family. Reindeer skin can be made into warm clothing, or into rugs, or tents. The bones can be shaped into weapons. The sinews serve for thread. Those who have no reindeer are poor indeed. They cannot easily move from place to place. They have no milk to drink. Fish is almost their only food. They must smoke and dry as much as possible to use when the lakes and rivers are frozen. It is difficult for them to carry this store with them if they have no animals.

In winter the tundra is deserted. Hunters and fishers have moved south towards the forests, or to places where good winter hunting and fishing can be had.

Exercises

1. What are the chief occupations in the forest?
2. Compare life in the tundra with life in the grassy steppes.
3. What advantages and disadvantages has Siberia as a place to emigrate to?
4. Why is the climate of Siberia so extreme?

CHAPTER IX

THE HIGH PLATEAUS OF WESTERN ASIA

84. The High Plateaus. Find the high plateaus of Iran and Asia Minor west of the Hindu Kush. These high dry lands all resemble each other. The mountains are almost bare of trees except on the slopes which face the Caspian and Mediterranean Seas. Very little rain falls at all. What there is falls in winter. This reminds us of the Mediterranean lands. It means that all cultivated land must be irrigated in the hot, dry summer. This is not possible everywhere. Many rivers carry very little water and run dry in summer. Others flow in deep gorges.

Most of this vast region is poor steppe, which passes into desert. The settled villagers cultivate the irrigated fields round their villages. The wandering herdsmen follow their sheep and goats from pasture to pasture. They often attack the settled villagers.

85. Persia. Persia is a type of the whole region. It occupies the larger western half of Iran. The land falls very steeply to the Caspian Sea on the north, and to the Persian Gulf on the south. A great part of

the interior is salt and sand desert. Ranges of barren mountains cross the plateau and separate its high bare plains.

86. Persia owes its fertility to its mountain streams, which feed the irrigation canals. This is not the only method. Deep wells are sunk at short distances to tap the stores of underground water. (See vol. i, § 29.) These are connected by underground tunnels which follow the slope of the land. Where these tunnels come out at the surface a kind of natural spring is formed. This is used for irrigation. The earth thrown up in digging the wells is left to dry in the sun. A line of mounds often stretches for miles across the plains, marking the course of the underground irrigation tunnel.

87. The Persian peaches, apricots, and nectarines are the finest in the world. Enormous quantities are dried for winter. Grapes are grown everywhere. Mulberry trees yield fruit as well as leaves.

88. Except in the irrigated areas and in the deserts Persia is a poor steppe. Millions of sheep, goats, and camels are kept. Famous horses are bred in the richest parts. The making of rugs and carpets is an important occupation. Persian carpets are the finest in

the world. Sheepskin coats are made for all the bazars of Central Asia.

89. Persian Food. Fresh or dried fruit is a very important food. Curdled milk is made into a sour junket. A peasant will dine contentedly on bread with a little fruit or cheese, with an onion for a relish. This is also a common meal in Southern Europe.

90. Persian Towns. Teheran is the capital of Persia. It lies at the foot of the high mountains which separate it from the Caspian Sea. Close to the city rises the beautiful volcanic cone of Demavend. From the surrounding hills Teheran shows as a green patch in a brown plain. High mud walls shut in its famous gardens. The mosques are roofed with coloured tiles, and have tall slender spires called minarets.

91. Another important city is Isfahan, a former capital. It lies among fields of opium poppy. From its minarets can be seen the great salt desert stretching away in the distance. A famous city of Southern Persia is Shiraz. Poets have praised its purple hills, its exquisite roses, its tall dark cypresses, its blue tiles, and its white minarets.

92. Travel in Persia is slow and difficult. Railways have yet to be made. The roads

are all bad. The traveller toils up a stony hill only to see another rising on the opposite side of the valley. Most of the trade is done by caravans of camels or mules. In south-west Persia there are rich fields of mineral oil, worked by British enterprise.

93. Afghanistan and Baluchistan. Eastern Iran rises towards the central parts of the Mid-World mountains. (See § 36.) Much is only suited for keeping animals, but there are fertile valleys high among the mountains. In northern Afghanistan is the broad irrigated valley of Herat. A route leads north by the Murghab valley to Merv. (See § 47.) Another leads south across difficult country to Kandahar, the great oasis of Southern Afghanistan. From Kandahar routes go to Kabul, the capital, and across Baluchistan to India.

94. Kabul lies in a broad valley shut in by spurs of the Hindu Kush. Outside the city the roads are planted with poplars. Kabul is surrounded by orchards and irrigated fields. The houses have gardens, which are shut in by high mud walls.

95. Kabul commands the least difficult route across the Hindu Kush into India. This goes by the famous Khaibar pass, a narrow defile shut in by high mountains. An armed

FIG. 10. A PERSIAN TOWN

This picture shows one of the larger towns of Southern Persia. Notice the walls, gates, and flat-roofed houses and the high mountains in the background. About 30,000 people live here.

enemy posted on the hill could easily cut a large force to pieces. This is one of the best routes into India from the north, because it crosses the mountains where they are narrow.

96. Baluchistan is one of the most barren parts of Asia. It consists of stony deserts, with an occasional oasis of date palms. It is held by Britain, because it is a possible route by which India might be invaded.

EXERCISES

1. What different occupations can be carried on on the plateau of Iran?
2. Why are there so few towns in Persia?
3. On what does the position of a Persian town depend?

CHAPTER X

THE HIGH PLATEAUS OF WESTERN ASIA (*continued*)

97. From the Black Sea to the Caspian. The magnificent peaks and forests of the Caucasus Mountains divide the Black Sea from the Caspian, and separate Asia from Europe. Valleys open to both these seas between the Caucasus and the mountains of Armenia.

98. At the eastern end of the Caucasus petroleum is very abundant. Baku, the centre

of the oil region, is a forest of chimneys and well shafts. Oil is carried through pipes to the Black Sea and pumped into special steamers. It is used to drive engines and steamboats in Russia and Russian Asia.

99. Armenia and Asia Minor. Armenia and Asia Minor do not differ greatly from Persia. They are poor steppe lands, shut in by and crossed by mountains. The highest of the Armenian mountains is the great peak of Ararat. The steppe passes into desert in the interior of Asia Minor. The mountains are the home of wandering tribes, who keep camels, sheep, and goats. Their hair and wool are made into rugs and into the famous Turkey carpets. The mountain folk are often lawless. The wandering Kurds, the shepherds of the Armenian mountains, attack and kill the settled Armenian villagers.

100. The settled people live in the valleys. Those opening to the Mediterranean are extremely fertile when irrigated. The slopes are terraced and planted with olives and other Mediterranean plants. Dried figs and other fruits are exported from Smyrna, the chief port of Asia Minor.

101. The Landscape of Asia Minor has its own beauty. The bare limestone mountains

take on exquisite colours at dawn and sunset. The tall dark cypress is a common tree. The plateau falls very steeply to the blue waters of the Mediterranean. In the south this high edge forms the Taurus Mountains. At their base is the fertile plain of Cilicia, where cotton is grown.

102. Syria. Syria is a desert with a few oases. The mountains of Lebanon border the Mediterranean. The famous cedar forests are almost gone. The snows of Lebanon feed the rivers which irrigate Damascus, an ancient and famous city. It is surrounded with beautiful gardens, among which run innumerable irrigation canals. From their green shade we pass at a step into the desert, which stretches over most of Arabia. North of Lebanon is Aleppo, on the shortest route from the Mediterranean to the river Euphrates.

103. Palestine, the Holy Land, is a poor steppe land, with the dry summers and winter rains of the Mediterranean. It produces all the plants which grow in the Mediterranean. The steppe passes into desert beyond Jordan. The Jordan rises in Lebanon, and flows in a deep valley to the Dead Sea, a salt lake lying far below the Mediterranean.

Palestine was once very fertile. The hills

Photochrom Co.

FIG. 11. JERUSALEM

Notice the terraced oliveyards round the city. The houses are low and flat-roofed like those of other Eastern cities.

were terraced and planted with figs, vines, and olives. Centuries of neglect have left it very poor. Beyond the Jordan wandering Arabs pitch their skin tents and follow their camels and goats from pasture to pasture.

104. The chief town is Jerusalem, built on the highest part of the plateau between the Jordan valley and the Mediterranean. A railway joins it to its port, Jaffa.

105. Arabia. Arabia is a drier, more barren Persia, with a few fertile valleys. Very little of the country can be cultivated. The date palm is grown in the oases. Its fruit, fresh or dried, is the commonest food. Coffee is grown on the hills of Southern Arabia, where sea fogs supply moisture to the growing plants.

In the better parts of the Arabian steppe fine horses are bred. Camels and sheep are grazed in the poor steppe and along the edge of the desert. The Arab is nearly always a wanderer, and a dweller in tents.

106. The chief towns are connected with the history of Mohamed, the Arabian prophet. He was born at Mecca and buried at Medina. These are oasis towns near the Red Sea. Every year they are visited by thousands of pilgrims who have travelled many hundreds

of miles. A railway from Aleppo to Medina carries part of this pilgrim traffic. (See § 102.)

107. The Euphrates. The Euphrates carries the waters of the Armenian Mountains to the Persian Gulf. Not far from its mouth

Photochrom Co.

FIG. 12. AN ARAB ENCAMPMENT

it joins the Tigris. The broad level plain between the mountains of Arabia and of Persia has been built up by the river in the course of thousands of years. (See vol. i, §§ 34, 36.) The river is still pushing its delta out to sea.

108. The Euphrates plain is called Meso-

potamia. In ancient days it was one of the gardens of the world. Little rain fell, but the rivers supplied water for the irrigation canals which covered the whole plain. Afterwards the canals were allowed to break down, and Mesopotamia became a vast expanse of baked mud with a few miserable villages. Lately irrigation works have been started again. In spring the mud plains are covered with green for a few weeks. Camels, sheep, and goats are grazed on them. Dates are grown near the Persian Gulf.

109. The chief city of Mesopotamia is Baghdad, on the Tigris. It was once the centre of a vast trade. The so-called Baghdad railway is nearly complete from the Bosporus to the Persian Gulf, and this will again bring much trade to Baghdad.

Exercises

1. What causes have led to the decay of Palestine? What is needed to make it as fertile as it used to be?

2. Compare Syria with Persia. Which is more advantageously situated?

3. How might the condition of Mesopotamia be improved? In what other parts of Western Asia is there similar room for improvement?

4. Why are the Kurds foes to the Armenians? In what other parts of Asia do we find the same kind of enmity?

FIG. 13. SCENE IN BAGHDAD

These curious round boats made of hide stretched on a framework have been used on the Tigris for thousands of years.

CHAPTER XI

ON THE ROOF OF THE WORLD

110. The Roof of the World. We have now seen how Asia rises from the northern plains to the Mid-World Mountains. Next we must see something of the mountains and high plateaus of Central and Western Asia.

Let us go back to the village in Ferghana (see §§ 50, 51), from which we started for Chinese Turkestan, and go south, across ranges of the Tianshan to the Pamir plateau, which has been called the roof of the world.

111. The Pamir Plateau. The Pamir plateau is shown on the map. It is where all the great ranges of Asia meet. From it the Tianshan, the Kwenlun, and the Himalayas run east, gradually getting farther from each other. West of the Pamir plateau are the Hindu Kush and other mountains which rise above the plateau of Iran.

The Pamir plateau is more than two miles above the sea. It is crossed by ranges about a mile higher. Between these ranges are broad level valleys called pamirs. These contain many lakes. Through each pamir flows a river, which freezes in winter. On either side of it are swampy stretches of moor. In spring

Fig. 14. A High Valley in the Hindu Kush

and early summer these are bright with grass and flowers.

The pamirs are too high for trees. In winter they are buried in snow. For a few weeks in

Fig. 15. 'The Top of the Last Pass'

summer they offer fine grazing. Wandering Kirghiz find their way thither by long and difficult routes. Their black felt tents are the only sign of life.

112. Where Three Empires met. Some years ago an English officer reached the pamirs after a journey of many weeks. He saw a

magnificent view from the top of the last pass. 'Behind me', he wrote, 'lay range upon range of mountain ridges and snow peaks. These are the chains of the Hindu Kush. On the far side of the pass we got our first glimpse of the pamirs. I realized that I stood where three empires meet. To the north, reaching from the snow-clad peaks of the Pamir plateau, across the oases of Central Asia, and over the steppes and forests of Siberia to the frozen Arctic Ocean, lay the Russian Empire. To the east lay the deserts of the Chinese Empire. To the south, across the great chasms of the Hindu Kush, lay British India.' The frontier of Afghanistan is also on the Pamir plateau.

113. The Hindu Kush is one of the great mountain systems of the world. Glaciers and snowfields fill its highest valleys. Thundering rivers rush in deep gorges between sheer precipices which seem to touch the sky. Terrible gales and snow-storms rage. Range after range has to be crossed and there are hardly any good passes.

114. The Upper Oxus. A few Pamir streams flow to the Tarim (see § 54), but most of them feed the Oxus. This river and its tributaries rush downwards in precipitous defiles between the Hindu Kush and the

mountains to the north. The valleys are so narrow that there is only room for the river. To pass up or down these valleys the traveller must climb along the face of precipitous slopes. When one side becomes impossible he must cross the river to the other. When a hill man

Fig. 16. Crossing a River on a Raft of Goatskin

wants to ford a stream he blows up a goatskin to keep him afloat. He holds on to this and swims as well as he can in the strong current.

115. Hill Villages in Central Asia. Villages are found at great heights in Central Asia. The valleys are so narrow that the villages are built high up the slopes beside some torrent which is rushing down to the main

stream. The slopes are cut into terraces and irrigated from the torrent. Sometimes the rocks are too hard to terrace. Then soil must be collected from the sand which the river uncovers in the dry season. This is carried up in baskets and built into terraces.

116. The people of such a village are very poor. They grow a little grain as well as apricots, mulberries, and peaches. The fruits are eaten fresh in summer and dried in winter. The mulberries are ground and used instead of sugar. A few undersized cattle are driven to the high pastures in summer, but they give hardly any milk. Their skins make clothes, bags, bottles, and other things. Their droppings are stored for the winter fire. Clay and mud have to do for building, and for making pots and pans.

Exercises

1. What is a pamir? Are the pamirs inhabited? If so, describe the kind of life.
2. Describe a hill village in the high valleys of Central Asia.
3. Why are the inhabitants so poor? Why do they travel so little?
4. How do they supply the needs of life in summer and winter?

CHAPTER XII

THE HEART OF ASIA

117. Map Studies. In the coloured map of Asia the central part of the Mid-World Mountains forms a vast dark brown area. The lowest parts of this are over 6,000 feet high. The highest parts are over five miles high. The highest mountain is over five and a half miles high. This is nearly twice the height of Mont Blanc, the highest mountain of Europe.

The mountains of Central Asia have many names. As the Himalayas they rise like a wall to the north of the plains of India. The Kwenlun Mountains spring from the Pamir plateau, and rise steeply above the depressions of Chinese Turkestan. Between the Kwenlun and the Himalayas is the high plateau of Tibet where the lowest valleys are nearly two and a half miles high. (See also §§ 36, 111.)

118. Routes in the Heart of Asia. Long difficult routes lead across the Mid-World Mountains. Travellers must carry with them tents, food, clothing, bedding, and all they will want on a journey lasting many weeks. Their roads lead along river valleys shut in between precipices, or over high bare level plains which are swept by icy gales. They

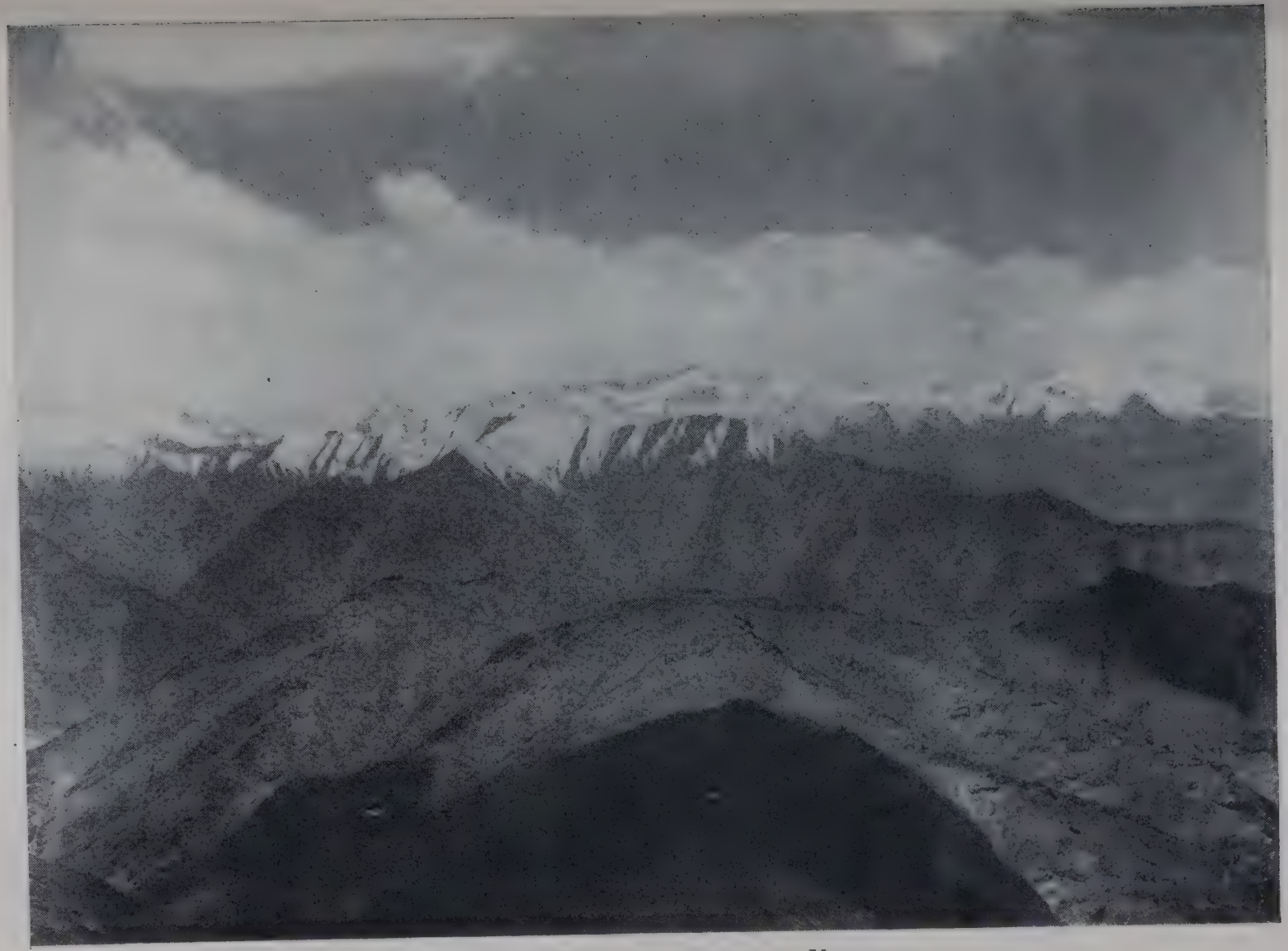

Fig. 17. A View of the Kwenlun Mountains

climb passes so high and steep that the yak is the only animal which can be used. Yaks look like shaggy Highland cattle. They are so sure footed that they hardly ever

Fig. 18. Travellers crossing a High Pass in the Hindu Kush

stumble. They can live at a great height. They carry heavy loads over passes that are far higher than the top of the Alps. They move very slowly, cropping as they go.

119. The traders, travellers, and pilgrims who attempt these long mountain journeys face death in many forms. A false step at a dangerous place may dash them to death far

below. Some are drowned by flooded rivers and others are crushed by falling avalanches. If the animals perish, a whole party may die of starvation. Many die every year of cold

FIG 19. DAL LAKE IN THE VALE OF KASHMIR

This fertile vale lies among the ranges of the Himalayas, more than a mile above the sea. It is irrigated by canals which are fed by the river, a tributary of the Indus. Some of these are shown in the picture. (See § 120.)

and exposure. The very height has its dangers to life and health. In spite of these risks much traffic goes on by these difficult routes.

120. The Indus and Leh. In the heart of the Himalayas rises one of the great Indian

rivers, the Indus. Its narrow valley runs north-west between lofty ranges of the Himalayas into Kashmir. There it turns south and descends through miles of gorge and forest to the plains of India far below. One of its tributaries flows through the high, fertile Vale of Kashmir before rushing down to the plains below.

Look out the course of the Indus on your map. In Western Tibet it flows past Leh, a town built on bare hill slopes above the river. In the centre of the town is the bazar. Narrow streets of flat-roofed mud houses surround it. High above all rises the palace of the ancient rulers. Leh is one of the great centres of Central Asia where caravans halt to procure men and supplies. In its bazars are to be met men from Afghanistan, from Kashmir, from India, from Tibet, from China, and from Chinese and Russian Turkestan.

121. Leh as a Route Centre. The traveller who intends to go to Kashgar (see § 55) sees to the north the glaciers and high peaks which separate the Indus from its tributary the Shyok. These he must cross by passes over three miles high. When he reaches the Shyok valley he has still to make his way across the Karakoram Mountains, by the

passes which lead down to Chinese Turkestan. If he is travelling south from Leh, he will

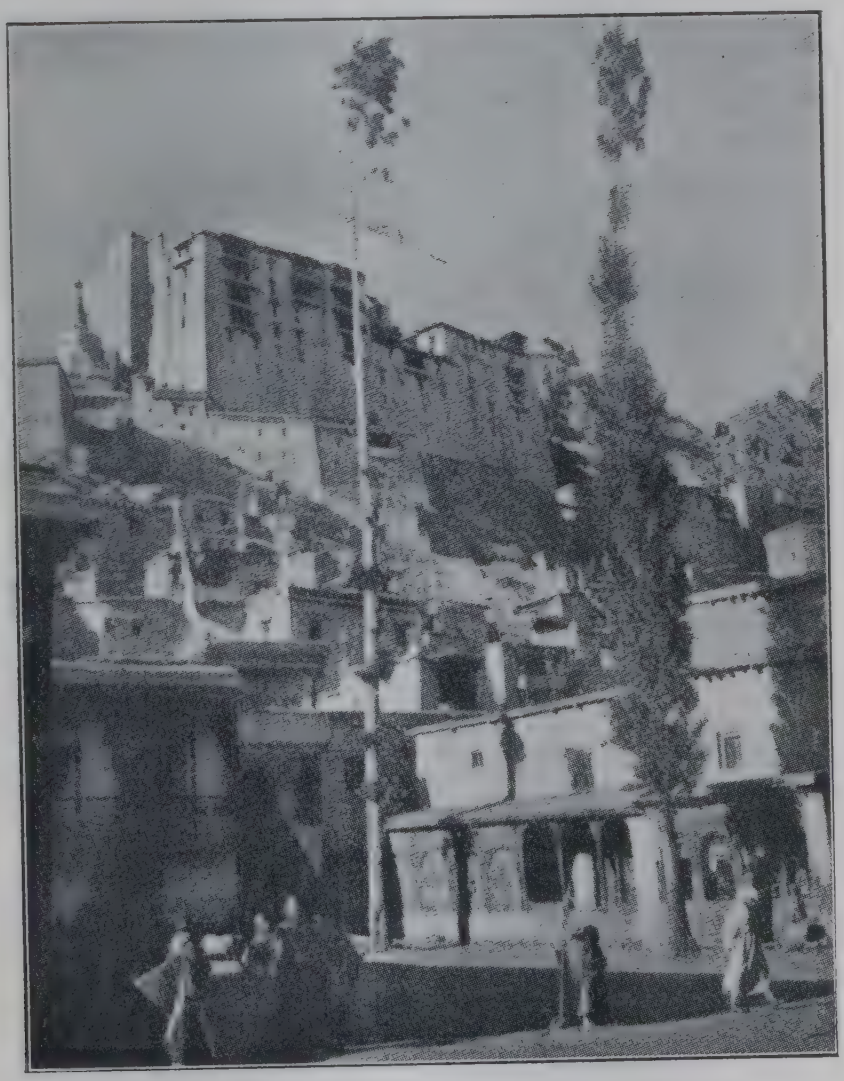

FIG. 20. A STREET IN LEH

look across the Indus valley to the mountains which separate the Indus from the plains of Northern India. He may make his way west to Srinagar, the capital of Kashmir,

FIG. 21. LEH

The town stands on the right bank of the Indus, which is flowing between the Himalayas and the Karakoram Mountains.

by following the wild valley of a tributary of the Indus. The journey is only 300 miles long, as far as from London to Carlisle, but it takes nearly three weeks. Or he might decide to go eastwards into Tibet.

EXERCISES

1. What are the chief difficulties a traveller has to face in the mountains of Central Asia?
2. Why is Leh so important as a caravan centre?

CHAPTER XIII

TIBET

122. Map Studies. Look again at your map. Two other great rivers rise near the Indus. One is the Sutlej, which flows down to the Ganges through wild Himalayan gorges. The other is the Brahmaputra, which flows in a direction exactly opposite to that of the Indus. The valleys of these two rivers separate the Himalayas from another great range beyond, of which we know little.

123. Tibet. Tibet is a region of mountains which are from four to five miles high. The valleys between are from two to three miles high. They have been filled to a great depth with rock waste from the mountains which shut them in. Central and Northern Tibet is the

bleakest and most desolate region in the world. The traveller from the north has to make his way over barren ranges, several hundred miles broad. He sees no sign of life. The wandering Tibetans bring their yaks to fatten on the pastures of the more southern ranges for a few weeks. As soon as the grass gives out they go back to Southern Tibet.

124. Southern Tibet is a better country. The valleys are less high and bleak than in the north. Some of them are fertile enough for the people to build villages and live a settled life. The Tibetans terrace the hills and irrigate the terraces and the level floors of the valleys. They plant barley, peas, and turnips, as well as apricot and peach trees. In summer they drive their yaks and sheep to the high pastures, where wild yaks and asses are found.

125. The Yak in Tibet. The yak is as precious in Tibet as the camel is in the desert, or the reindeer in the tundra. It forages for itself for the greater part of the year. Yak milk is a very valuable food in Tibet. It is too precious to be drunk fresh. The Tibetans make it into butter, so that it can be kept longer, and used for food in winter. This butter is used instead of milk in tea, and it is mixed with barley meal to form a kind of

porridge. The tea has had a long journey. It is made into bricks and carried by yaks from China. Yak droppings are the only fuel that the Tibetans can find, for few trees grow at so great a height. A fire of yak manure is very smoky, but it makes it possible to heat water and to cook. In spite of the winter cold, fires are hardly ever used merely for warmth. Yak fuel is too precious to be wasted on mere comfort. It is one of the most valuable things the Tibetans possess. For that reason fines sometimes have to be paid in it.

The yak has other uses still. Besides being a beast of burden it is also yoked to the plough. Its skin makes clothes, tent coverings, bottles, and bags. Even boats are made of it.

Tibetan houses are poor places. They are made of stone or of sun-dried bricks. They are generally small, dark, and dirty. We must not blame the Tibetans too much for this. Water is very scarce, and for a great part of the year it can only be got by melting ice. Only the settled Tibetans build houses. The wandering Tibetans live in skin tents.

126. Lhasa. Lhasa, the capital, lies in the broad fertile valley of a tributary of the Brahmaputra, surrounded by hills. High

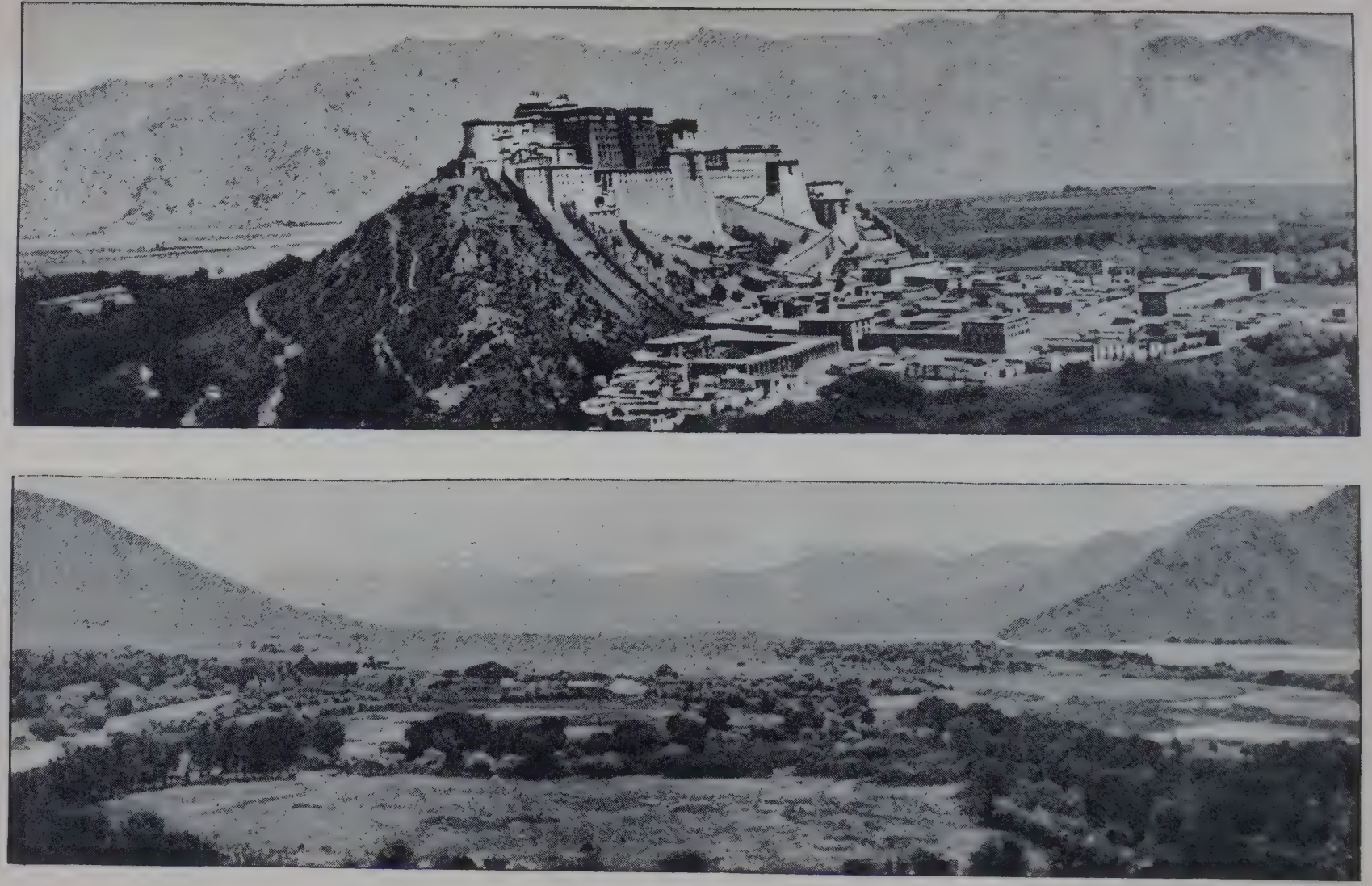

FIG. 22. LHASA

The top view shows the city with its great palace-temple standing in a plain shut in by mountains. This plain is more than two miles above the sea. The lower view shows the plain and the mountains.

above the city rises the palace of the Lama, the head of the Buddhist faith. Its great height, its crimson roof, and its gilded domes, make it a splendid sight. The city is full of temples. Buddhist pilgrims come from all parts of Asia, travelling across deserts and mountains to their holy city.

Exercises

1. Show that life in Tibet would hardly be possible without the yak.
2. Compare life in Tibet with life in the tundra. Which is the harder? Give your reasons.
3. Show that the Tibetans use much foresight to enable them to live through the winter.
4. Is Tibet thinly or thickly peopled? Give reasons for your answer.

CHAPTER XIV

THE HIMALAYAS

127. The Himalayas. From Lhasa to the plains of India is a journey of many weeks across high passes of the Himalayas. All are very steep and difficult, and some are always covered with snow.

The scenery of the Himalayas is the grandest in the world. All that is magnificent in the Alps is found on a greater scale. The snow

peaks are twice as high. The glaciers are far larger. The rivers are wilder, and they rush

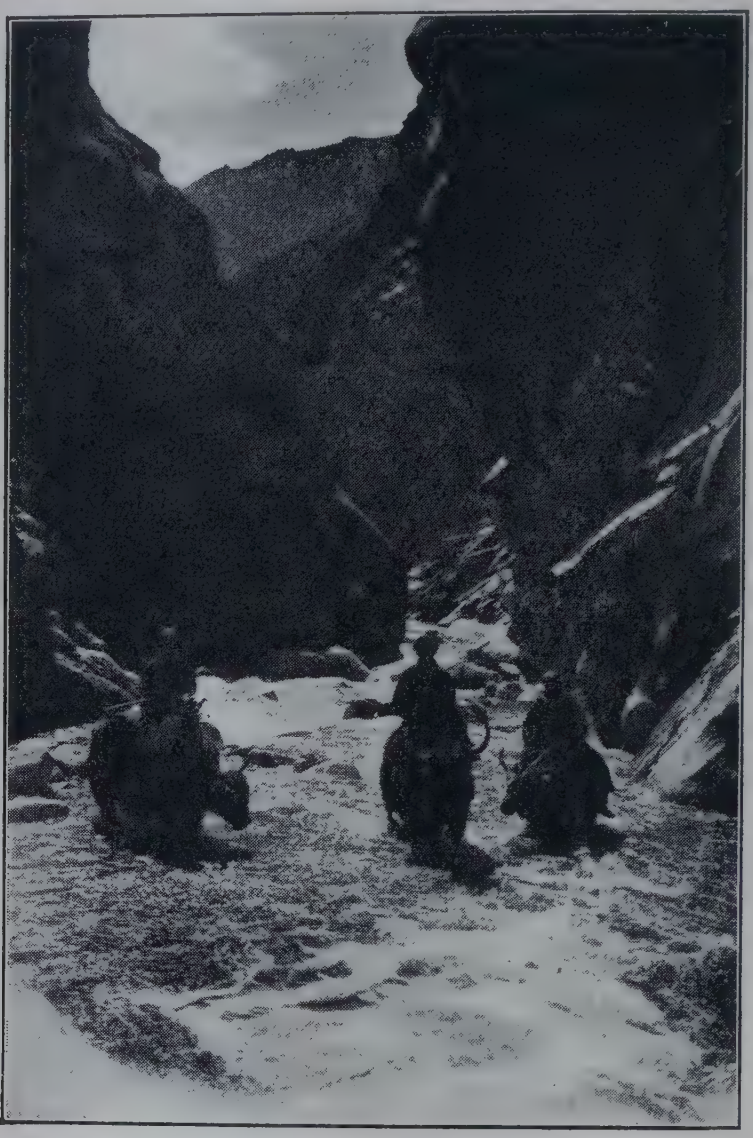

FIG. 23. A GORGE IN THE HINDU KUSH
The hillmen are fording the stream on Yaks.

with even more irresistible force. The highest peak is Mount Everest, on the Tibetan side of the main range. It is the highest known point in the world and is five and a half miles high.

It is finely seen from the Brahmaputra valley as a huge glittering mass of snow. (See Fig. 24.)

128. The View from Darjiling. One of the best routes from Lhasa leads down to India through the Sikkim Himalayas. Among these lies Darjiling. It can be reached by railway from the plains of Northern India. In about thirty-five miles the line rises to a height of a mile and a half above the sea. The line climbs first through the tea-fields of the lower hills. Then it enters magnificent forests, which clothe the slopes of the higher valleys. In some parts of the Himalayas the slopes are forested to a height of over two miles. The view becomes grander. Far below are the valleys the train has left. Far above are the great peaks towards which it is climbing. Steep precipices fall away from the edge of the line, dropping to raging torrents far below. The line curves round hill sides and plunges in and out of tunnels. It is carried on bridges across gorges which seem to have no bottom. Little Tibetan villages are passed. At last the distant plains of India are seen no more. The train is descending the northern slopes to Darjiling, a mile and a half above the sea.

From Darjiling range after range of the

Himalayas is seen, one snowy peak rising behind another. Kanchenjunga, almost the highest mountain in the world, towers into the air fifty miles away. Its great precipices fall steeply to the river gorges at its base. Its snows glitter in the sunshine. On either side of the giant are other magnificent snowy peaks, rising out of a sea of forest.

A few miles from Darjiling a glimpse is caught of Everest, nearly a hundred miles away, rising behind the snows of the nearer ranges.

129. The Mountains of China and Indo-China. Your map shows that the mountains of Eastern Tibet spread out into ranges which run east and south. We know very little of them. Great rivers rise in their snows and pour down through their gorges. The forests which cover their lower slopes and fill their lower valleys are the home of wild tribes. Vast regions have never yet been trodden by a white foot.

Exercises

1. Why are forests found at a greater height in the Himalayas than in Europe?
2. Draw a map to show the rivers rising in the Himalayas.
3. Why do we know so little of the mountains of Indo-China?

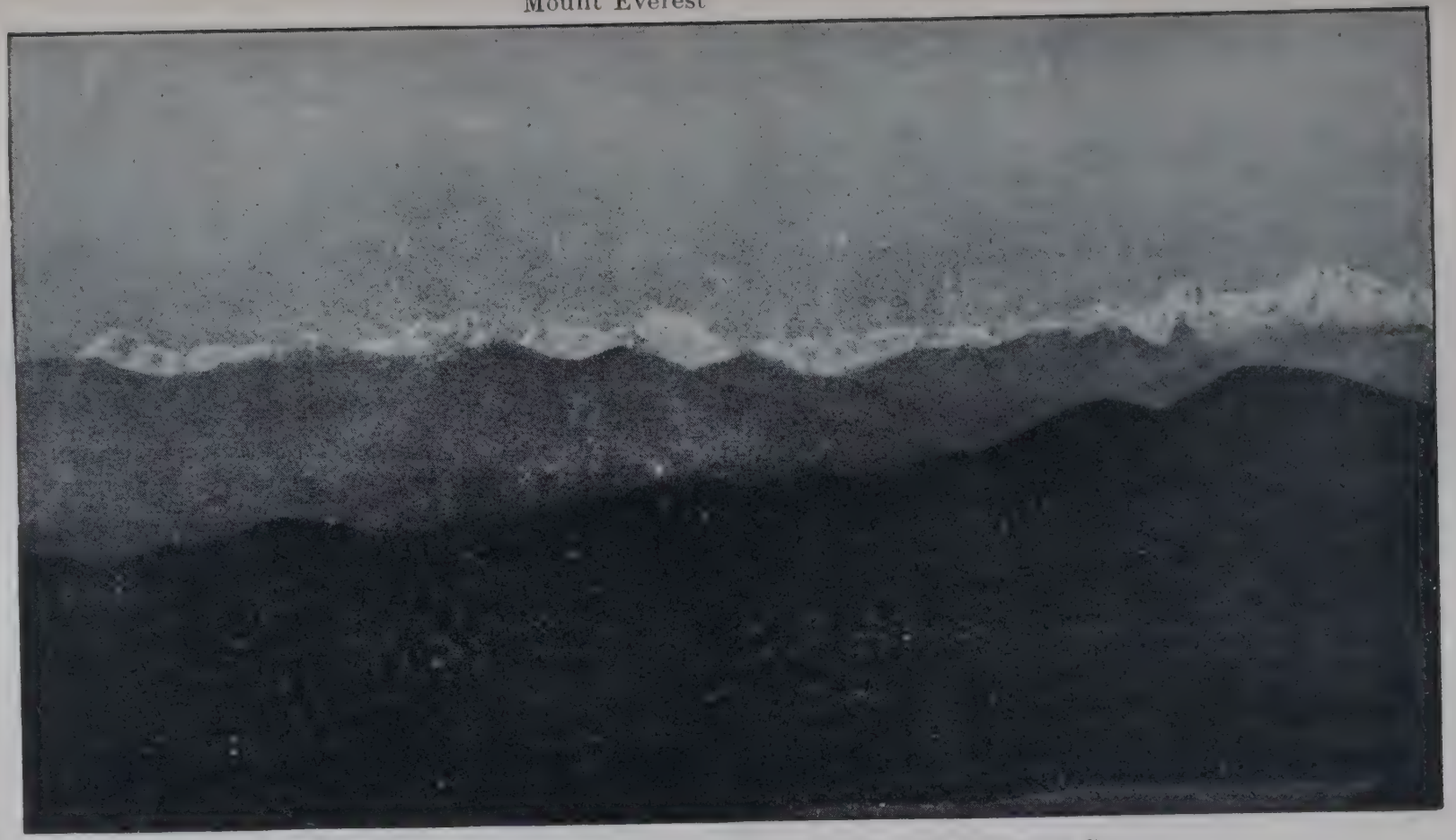

Fig. 24. The Highest Himalayas seen from the Tibetan Side

The highest peaks of the Himalayas are in the ranges overlooking Tibet. They are not so well seen from the Indian side, because high ranges hide them. This view is taken in Southern Tibet from a hill which is two or three miles high above the sea. Mount Everest is seen nearly 100 miles away, rising above the lower ranges.

CHAPTER XV

THE MONSOON LANDS

130. A New World. When the last mountain ranges are crossed we enter a new world. Instead of steppes and deserts, the home of scanty wandering tribes, we find fertile plains covered with villages and great cities, and feeding many millions of inhabitants. These differences are due to our having come into lands where rain falls regularly. This new world has new plants and new animals. Spices, tea, and strange fruits and palms are among the plants. The lion, tiger, elephant, and ape are among the new beasts.

131. The Monsoon Lands. Find the monsoon lands on your map. The south of Arabia receives seasonal rains. India also does. The fertile lowlands of the Malayan peninsula run inland between the mountains. The islands of the Malay archipelago are covered with forest in which are fertile clearings. On the eastern coast are the plains and river valleys of China and the Japanese islands. All these are monsoon lands, that is lands receiving rain at fixed seasons. Nearly all are thickly peopled in the lowlands.

These rich lowlands are cut off from each

other by high mountains. There are no easy land routes between them. Each of the monsoon lands has a character of its own.

132. The Cause of the Monsoons. The monsoon lands owe their fertility to the seasonal monsoon rains. These lands lie south of the Mid-world Mountains, and are surrounded by great seas. Sea and land are very differently affected by the sun's heat. The land gets much hotter than the sea in summer. (See vol. i, §§ 26, 27.) You can test this by stepping barefoot from a hot dusty road into a brook or pool.

The monsoon lands lie in the hot belt. Their surface becomes intensely hot in summer. The hot air quivers above the land. As the air becomes hotter its also becomes lighter. Being lighter it tends to rise. When air is tending to rise its pressure is said to be low.

The seas heat more slowly. In summer the seas of Southern Asia are cooler than the land. The air over them is also cooler. As the heated air over the land rises, cooler heavier air is drawn in below from over the sea. This inflowing air is felt as a breeze blowing from the sea. In India it blows chiefly from the south-west and is known as the south-west monsoon.

These winds blowing inland from the sea

are full of moisture which they have taken up from the ocean. (See vol. i, § 23.) They bring heavy summer rains to the monsoon lands. If the monsoon is late or brings less rain than usual, famine follows.

133. The Breaking of the Monsoon. By May the heat of India and Ceylon has become unbearable. The pools and rivers are dry. The ground is parched and split into great cracks. The soil is dried into fine dust. Plants droop. The stifling air is full of dust and haze. All India is longing for the monsoon. At last it breaks. Vivid flashes of lightning light up the leaden sky. The thunder peals. The rain falls in torrents and pours off the ground in sheets. Its noise is deafening. In an hour or two the dry river beds are filled with raging torrents. As the days pass they flood the country round. Sometimes the rain stops for a few hours, but it soon begins again. The dry soil is soaked through and through. Dust is turned into mud. In a few days the brown land is green with sprouting plants.

134. The Use of the Monsoon. The monsoon winds blow very regularly. People know when to expect them. They know, too, that no more rain will fall till the next monsoon. In the monsoon lands men have

learned to store up water for use in the rainless season.

Irrigation is very important in the monsoon lands. In some parts the rivers carry enough water to irrigate the region all the year round. In others they run dry in summer. Sometimes they run in deep gorges from which canals cannot be cut. In some parts of India water is stored in artificial reservoirs. In Southern India and Ceylon rivers are dammed to form great artificial lakes, which keep the irrigation canals full.

EXERCISES

1. Why are the monsoon lands so different from the lands north of the Mid-World Mountains?
2. Describe and explain the monsoon climate.
3. Why have the monsoon lands long been very rich and highly civilized?

CHAPTER XVI

INDUS AND GANGES PLAINS

135. The Plains of Northern India. The snows of the Himalayas feed the Indus, the Ganges, and their tributaries. All these rivers are loaded with rock waste from the mountains. As they rush down they tear away soil and rocks from the mountain sides, and carry

this along with them. (See vol. i, § 32.) They carry most when they are swollen by the melting snows. In the course of ages they have built up vast plains at the base of the Himalayas. (See vol. i, §§ 34, 35.) Year by year the Indus is pushing its delta farther into the Arabian Sea, and the Ganges delta is creeping farther into the Bay of Bengal.

136. The Punjab. The Punjab, the Land of the Five Rivers, is part of the vast plain which lies at the southern base of the Himalayas. It is crossed by great tributaries of the Indus. For many months their broad beds are filled with a network of streams which carry very little water. In early summer when the snows melt in the Himalayas they swell into broad, deep, swift rivers which rage across miles of river bed. The wild current sweeps along great trees uprooted in the mountains. If these should dam the river miles of country would be flooded. If they should dash against the piers of a bridge its foundations might give way under the shock. In the Punjab the river banks are low, and if the course of a river is checked it makes a new channel. Many villages are destroyed in this way. The Government spends enormous sums in making embankments to hold the rivers in.

137. The main stream of the Indus leaves the mountains near Peshawar. Here Britain keeps strong garrisons to guard the Khaibar Pass route. (See § 95.) The river spreads out in the Peshawar valley, but soon it narrows again to a gorge. In this part of its course it receives the Kabul river from Afghanistan.

138. At last it reaches the open plains, where it breaks up and often shifts its course. It unites with its Punjab tributaries. Here irrigation canals are being made to irrigate the deserts round the lower Indus. It passes on the south into the dry region of Rajputana, the home of one of the finest Indian races. Rajput chiefs have built magnificent cities in the irrigated oases along the southern margin of the desert.

139. Sind, across which the Indus flows to the sea, has a very dry extreme climate. There are few plants to protect the soil, which becomes intensely heated in summer. For the same reason it cools quickly in winter. Here the Indus is higher than the surrounding country. This is because the river is always dropping sediment on to the bottom of its bed. (See § 177.)

South of Haidarabad the Indus forms a great delta. The port of Karachi is built

at its western end. It is the outlet for the Indus basin.

140. The Irrigation System of the Indus. The British Government is spending enormous sums to irrigate the Punjab. Great dams are built across the rivers. These deepen the water behind and force it into the canals on either side. Some of these canals are over two hundred miles long and carry more water than the Thames at London Bridge. Smaller canals distribute the waters of the larger ones. Wherever the canals go fertility follows. The dry soil becomes soft rich mud. Within the last ten years immense uninhabited wastes have been turned into a land of flourishing villages. Many of these grow wheat as a winter crop. This is exported from Karachi. Similar work is being begun in the desert of Sind. These dry plains have now 2,000,000 inhabitants.

141. The Plains of the Ganges. These are not so dry as the Punjab and Sind. They receive heavy rains from the rainy monsoons which blow up the Ganges Valley from the south-east.

142. The plains of the Lower Ganges form Bengal. The Ganges, like the Indus, is used for irrigation. A great canal taps the

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FIG. 25. BENARES

river where it leaves the Himalayas. This canal irrigates the region between the Ganges and its tributary the Jumna. Twenty miles lower tributaries from the mountains have again made the Ganges a great river. Another great canal carries away its waters. Both of these canals carry at least twice as much water as the Thames at London Bridge.

Along the Ganges and its tributaries are old and splendid cities containing magnificent buildings. Delhi, Lucknow, Agra, and Benares are the most famous. Delhi, now the capital of India, has always been important because it stands on the route from the Indus desert to the fertile plains of the Ganges. Its emperors adorned it with marbles and gems. It has been sacked many times but has risen anew. Agra has magnificent palaces and tombs. Benares is the holy city of the Hindus. Pilgrims come in thousands to wash away their sins in the sacred river. In these and many other cities famous old trades are carried on. The jewellers, goldsmiths, weavers, and embroiderers of India produce exquisite and costly work.

The plain of the Ganges is hot and unhealthy in summer. During the hot season the Viceroy and his court go up to Simla in the Himalayas.

Photochrom Co.

FIG. 26. STREET SCENE IN CALCUTTA

143. The Ganges enters the sea by a great swampy delta, full of forested islands called Sunderbunds. To the same delta flows the Brahmaputra, which we last saw in Tibet. (See § 127.) It crosses that country and rushes down through the forests and tea gardens of Assam to the plains of Bengal.

144. Calcutta, till lately the capital of India, is built on the Hughli, one of the streams by which the Ganges enters the sea.

145. The Villages of Bengal. The many splendid cities of the Ganges are really less important than the thousands of villages which cover the plains. Here millions of hard-working peasants cultivate the village lands. Many have never seen a white face.

146. For most of the year the plains of the Ganges are a vast brown expanse. The mud villages are the same colour. Round the villages deep wells have been sunk to the stores of underground water. Buffaloes and oxen slowly wind the buckets up and down. Patient men pour out the water they bring up over the thirsty fields. The very poor have no animals and wind up the buckets by hand.

With sufficient water Bengal will grow anything. We are passing into the rice lands. Rice can only be grown where the crops can

first be flooded and then exposed to great heat. It is a profitable crop in all the monsoon lands. A very large population can live on rice at a very small cost. It is dangerous and painful work to stand for hours in flooded fields. The rice-growing peoples frequently use opium to deaden their sense of pain.

147. The Indian village is a world in itself. Potters, weavers, carpenters, and many others hand on their trades from father to son. In almost every village there is a working goldsmith. The Indian peasant hoards his poor savings in the form of jewellery for his women folk. It is a custom handed down from the old fighting days, when jewels could easily be hidden and often escaped plunder.

Exercises

1. Describe the irrigation system of the Indus.
2. Why are there more large cities in the plains of the Ganges than in the Punjab?
3. Can you explain why invaders of Northern India would have to cross the Punjab to reach Bengal? How does this affect Delhi? (Compare § 95 with chs. xi–xiv.)
4. Why do you think the British capital is built where it is?
5. Describe the life of an Indian peasant.
6. Draw a map of the Ganges and its tributaries, and mark the chief towns.

CHAPTER XVII

SOUTHERN INDIA AND CEYLON

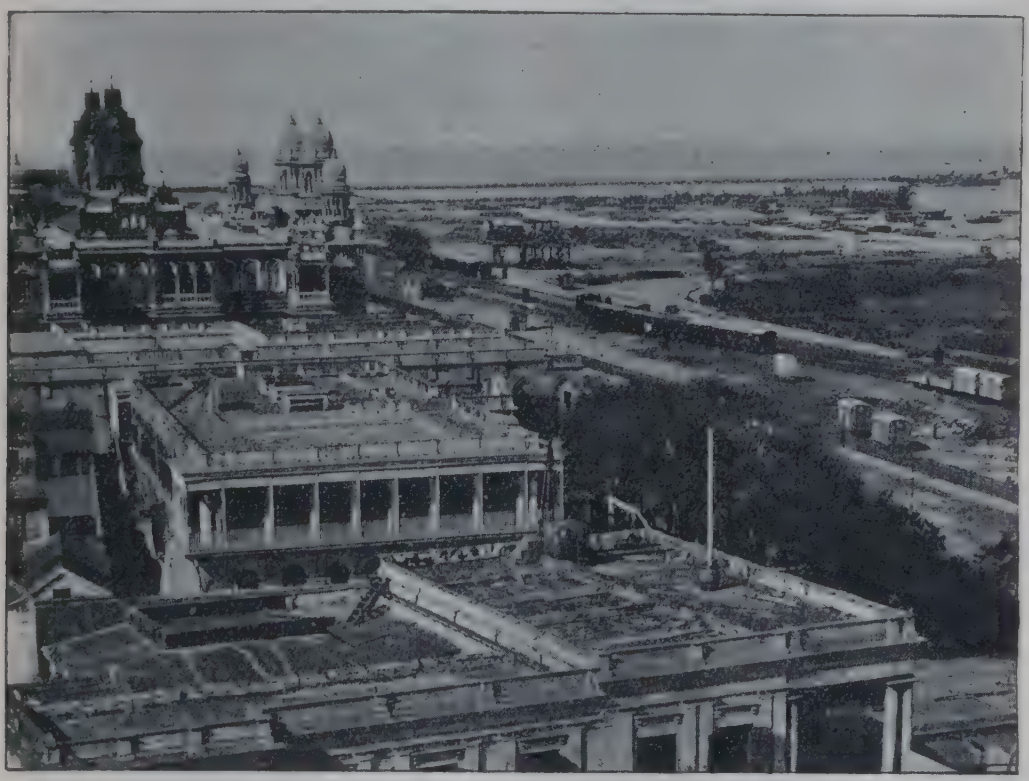
148. The Deccan. South of the northern plains India consists of a vast tableland called the Deccan. In the west this is about half a mile high. It sinks gradually to the east. On the north it falls by forested hills to the plains. The northern region is ruled by many native princes. Descendants of the oldest races of India live in its forests. They were driven there by the conquerors who seized the northern plains.

149. On the west the Deccan falls steeply to the Malabar coast, which fringes the Arabian sea. From the sea it is seen as a high forested mountain range, called the Western Ghats. At the base lies Bombay, the busiest port of India, which does an enormous trade by sea. It manufactures the cotton grown on the plateau above. In places its forest of mill chimneys reminds us of a Lancashire town.

150. The lower broken eastern edge of the Deccan tableland rises as the Eastern Ghats above the plains of the Coromandel coast. All along this coast the surf makes it difficult to land. The chief town and port is Madras.

151. Railways climb from the Malabar and

Coromandel coasts to the plateau. Here we find ourselves in a region very unlike the vast level plains of Northern India. Hills rise for 1,500 or 2,000 feet above the general level of the plateau. They are often densely forested. Many of these hills end in steep craggy preci-



Keystone View Co.

FIG. 27. MADRAS

pices which are difficult to climb. All over Central India the chiefs have turned them into castles and strongholds. The country is crossed by deep gorges and ravines. Their forested depths are the home of many wild animals. Much of the surface of the Deccan is wild and rocky, but there are fertile stretches of

cultivated lands between the hills. Much of the soil is the rich black cotton earth in which cotton is grown to perfection. Wheat, pulses, opium, and millet are important crops.

152. Only one great river flows east, the Narbada. The Mahanadi, the Godaveri, the Kistna and the Cauveri rise in the higher west and flow east. They form falls in their descent to the sea. The Cauveri Falls supply electricity to the goldfields of Mysore.

153. Politically the Deccan is under divided control. In the north are the Central Provinces. The margins form part of the Bombay and Madras Presidencies. The southern part of the Deccan forms the native states of Haidarabad and Mysore.

154. Southern India. In the south the Deccan rises to the Nilghiri Hills. South of these is the Palgat Gap, a depression between them and the hills of the native state of Travancore. It is an important railway route between east and west.

155. Southern India contains many different kinds of country and of people. It includes sea-coast, plain, and mountains. Madras itself is a great modern port. Inland are famous old cities with temples as magnificent as those of Northern India. Some of

the people are learned scholars, clever merchants, and industrious peasants. Others are

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FIG. 28. A TEMPLE IN SOUTHERN INDIA

The picture shows one type of the splendid architecture found in many parts of the monsoon lands. Every tier of the immense towers is elaborately carved and ornamented. Notice also the great tank, made for the temple use. Such artificial reservoirs are very necessary in countries with a long dry season.

primitive people, living in forests, practising strange religions and with only the simplest wants.

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FIG. 29. TEA-PICKING IN CEYLON

Notice the terraced hill sides planted with tea.

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FIG. 30. COFFEE-PICKING IN CEYLON

156. Ceylon. Ceylon is a mountainous island lying at the south of India. Much of it is covered with dense tropical forest. Its hills have been terraced and planted with tea, and many other crops grown. The rubber plantations are important.

Ceylon has a long and famous history. Once it was covered with splendid cities and palaces. Its great artificial lakes made it one of the most fertile lands in the world. Its conquerors allowed the irrigation works to fall into decay. The forest quickly covered what had been fertile clearings.

The chief city is Colombo. It is a busy port. Among other things it exports the jewels found in the mountains and the pearls brought up from the surrounding seas.

EXERCISES

1. Describe the Deccan.
2. Why has Bombay become an important manufacturing city?
3. Which is better placed for sea trade, Bombay or Madras? Why?
4. What have India and Ceylon to export to Europe?

CHAPTER XVIII

BURMA, SIAM, AND INDO-CHINA

157. The Malayan Peninsula. East of India is an immense peninsula cut into smaller

ones. In this book it is called the Malayan peninsula. It is often called Indo-China. It is cut off from Tibet and China by high mountains. These belong to the Mid-World Mountains. (See § 129.)

158. The Rivers of the Malayan Peninsula. Great rivers rise in the heart of these mountains. They fall several thousand feet before they reach the sea. Their upper courses are in steep, narrow, difficult gorges, separated from each other by high forested mountains. It is very hard to pass from one river valley to the next.

159. All these rivers flow very swiftly and carry much rock waste with them. This they build up into great deltas. All round the coast, from the Ganges to the extreme north of China, the rivers are rapidly building up new land. Their deltas consist of rich soil, and are densely peopled. (See § 135.)

160. The Delta Lands. Each delta is the nucleus of a state. The Irawadi and Salwin deltas are the richest parts of Burma. The delta of the Menam is the nucleus of Siam. Farther west the river deltas have been conquered by France.

161. We are passing south into a very wet region, where the wet season lasts

from May to October. The low-lying lands are flooded for miles along the rivers. The houses have to be built in a special manner. Piles are driven into the swampy ground to make a firm foundation. The houses are

FIG. 31. IRAWADI RIVER, KATHA

raised on posts to be safe from floods or wild beasts. They are made of bamboo thatched with palm leaves. Every house has its boats ready for use.

In the delta regions the people are as much at home in the water as on land. Children can swim as soon as they can walk. The

[1] See the similar use in Borneo (fig. 36).

rivers are the highways of the country. Even the markets are held on the water.

162. The Rice Lands. These delta lands are always muddy and swampy. They are flooded for many weeks. The hot moist climate suits rice, the chief food in the deltas. It is eaten with fish caught in the rivers and seas. Sometimes fish is made into highly flavoured sauces, which give a relish to the insipid rice.

163. The Forests of the Interior. Behind the deltas lie vast forests. One of the most valuable trees is teak, a very hard wood which grows in the forests of Northern Burma. It is cut in the forests and then dragged by elephants to a river. The strong current floats it down to the delta ports, where tame elephants drag the huge logs up the mud banks.

164. Rangoon, the capital of Burma, is built a few miles from the sea, on a river connected with the Irawadi. Round the city are palms, banana groves, bamboo thickets, and rice fields. There are many splendid temples. Rangoon is a busy port, exporting teak and rice. The people are picturesquely dressed in richly coloured silks.

165. A Voyage up the Irawadi. From

Rangoon we might sail nearly eight hundred miles up the Irawadi. We should see much of Burmese life, for all the villages are built by rivers. Every hill has its temple or pagoda, with gilded and coloured roofs.

Four hundred miles up the river we should reach an old capital. It contains a thousand temples. The finest was built about the time of the battle of Hastings. The people of the monsoon lands were rich and civilized when our own ancestors were savages.

A hundred miles higher we reach Mandalay, the capital of Upper Burma. Like all important Burmese cities it has splendid temples.

166. Above Mandalay the river flows between mountains. The gorges become narrow and winding. The forest spreads on either side. We see the distant mountains of China rising on the sky-line. The river is broken with rocks and rapids. Our boat must stop.

167. The Salwin. The Salwin is navigable for less than a hundred miles. Above the delta its course is broken with rapids. Its swift current brings down vast quantities of teak from the mountains. This is exported from Moulmein, the chief city of the delta.

168. The Occupations of Burma. Agriculture is the chief occupation of Lower

Burma. Rice is the chief product. Fishing is also very important. Some fish is eaten fresh but more is dried and salted.

In Upper Burma there are high plains among the mountains. There grow wheat, cotton, and other crops. The mines are very important. The mountains of Burma produce the finest rubies in the world.

169. Singapore. South of Moulmein the peninsula is very narrow and covered with forests. Rice is grown in the river swamps. Tin is mined. There are many villages along the numberless rivers.

Singapore is a British coaling station at the end of this long peninsula. It is surrounded by beautiful tropical vegetation. In its fine harbour may be seen great steamers from all parts of the world, Chinese junks with their brown sails, and boats of all descriptions.

170. Siam. The richest part of Siam is the Menam delta. This river flows from little known forested mountains to a great delta. The forests of Siam are magnificent. The trees are of enormous size. Monkeys and bright parrots spring from branch to branch. At night fireflies light up the darkness.

171. Bangkok. The capital is Bangkok, on the delta. Its temples have floors and

columns of silver or gold. The sacred images wear priceless gems. The rivers are bordered by houses of bamboo. The city is intersected by creeks, which serve as streets.

172. The Mekong. The Mekong rises in Tibet and flows from forested mountains to the plains of its delta. These form Cambodia and Cochin China, both French. Cambodia has ruins of great temples. The life resembles that of Burma and Siam. It centres round the rivers. Rice is the chief food.

173. Annam is a mountain country lying between the rich deltas of the Menam and the Red River. The Red River delta forms the French colony of Tongking.

174. Tongking differs in one important respect from the other delta lands. It is rich in coal. This will make it important in the future. The Far East is one of the richest coal regions in the world.

EXERCISES

1. Explain fully how new land is being made in Eastern Asia.

2. Why is rice the chief crop in the deltas of Indo-China? Has this any influence on the life of the people?

3. Show that water is as important as land in the life of Indo-China.

4. Write a short account of Siam. What natural advantages does it possess?

CHAPTER XIX

THE MONSOON LANDS OF EASTERN ASIA

175. Map Studies. Look at the map. A great part of China consists of mountains which spring from the high plateaus of Mongolia and Tibet. In Southern China these mountains reach the sea. Farther north they leave broad lowlands along the coast. Two great rivers and many smaller ones flow down from Tibet. The two largest are the Yellow River and the Yangtse. They rush through deep gorges and defiles for hundreds of miles. Then they open to fertile plains.

176. The Plains of China. These plains have been built up by the rivers out of the soil which they bring down from the mountains. We have seen this work going on in Mesopotamia (see § 108), Northern India (see § 135), and Indo-China (see § 159). In China, too, the rivers are steadily building land out into the sea, and deepening the soil in every flood.

177. The floods in China are often very disastrous. The Yellow River has been called China's sorrow. In the plains it drops a great deal of sediment on to its bed. This is steadily raising the bottom of the river. The banks are embanked to prevent floods. In

the course of ages the river has risen high above the surrounding country. At a distance it looks like a railway embankment crossing the plains. The banks slope away on either side. If there is a leak in the embankment the river pours down the slope and floods the surrounding country. Millions of lives have been lost in this way.

The Yangtse has been more carefully dredged than the Yellow River. Its bed and banks have never been allowed to rise in the same way. It also overflows its banks, and turns the country into a vast lake. The villages are built on artificial mounds, to keep them above the floods.

178. The Yellow River. The Yellow River, called by the Chinese Hwang-ho, rises in Tibet. Its upper course is through mountains and deserts of which we know little. Trace it on the map. Notice its bend round the Ordos Desert. After this it flows due south, and then turns east to cross the yellow plains of North China.

179. These plains are covered with thousands of feet of a fine deep yellow soil called loess. Loess is a loose soil which has been carried by the winds from the dry mountains and deserts of Central Asia. In the course of ages it has

covered mountains and filled valleys, forming vast level plains. Whenever a west wind blows the air is loaded with dust. The dust storms make Peking, the capital of China, a very uncomfortable place to live in.

180. Loess is very fertile. It is also very soft. Rivers cut deeply down through it and flow in steep valleys out of sight. The roads sink deeply till they are also out of sight. The houses are built far below beside the rivers and roads. In this part of China irrigation is impossible, for the rivers are sunk too deeply.

181. After it leaves the loess region the Yellow River has built up the high bed already described. It frequently shifts its course, and this always means the destruction of villages and the loss of thousands of lives.

182. North China has warm summers and cold winters. It is too cold for rice or tea to be grown. Wheat, millet, and beans form the food. The north Chinese, living on better food, are taller and stronger than the Chinese of the rice lands.

183. The mountain provinces of North China contain immense quantities of coal and iron. No part of the world is richer. These coal and iron fields will some day supply great Chinese manufactures.

FIG. 32. STREET SCENE IN PEKING

183. Peking. The capital of China is Peking. It is in North China, near the base of the mountains which separate China from Manchuria (see § 77). It is surrounded by huge walls, sixty feet high, with high towers and many gates. The traveller first enters the Tartar city, which is connected with the Chinese city. No one is allowed to pass between the two after sunset. In the centre of the Tartar city is the Forbidden City, surrounded by high walls. Peking has broad streets and large squares. Its streets are crowded with camels which are bringing in wood, coal, and all kinds of produce. Many mule carts are seen. The railway has now been brought to the Tartar city through breaches in the great walls. Peking is about sixty miles from its port, Tientsin on the Pei River.

184. Korea. East of Northern China and south of Manchuria is the wooded mountainous peninsula of Korea, controlled by Japan. Wheat, rice, beans and other crops are grown in the west, which is flatter and crossed by many rivers. The capital is Seoul.

EXERCISES

1. Describe the basin of the Yellow River.
2. Name some advantages which would enable China to become a great manufacturing country.
3. Why is labour cheap in the rice lands?

CHAPTER XX

THE MONSOON LANDS OF EASTERN ASIA
(*continued*)

185. The Yangtse and its Plains. The Yangtse rises in the heart of Tibet. For two thousand miles it flows in narrow gorges in the mountains. About a thousand miles from the sea it enters the plains. These plains were once great lakes. Most of them have been filled by the sediment brought down by the river. Those which remain help to regulate the floods. The Yangtse floods spread enormous quantities of soil over its plains. It is said that the river raises them two feet and a half in a hundred years. It is rapidly making new land at its mouth, where the currents are too strong for a delta to be formed.

186. On entering China the Yangtse crosses the mountainous province of Sechwan. This is covered with red earth, as fertile as the yellow plains of North China. A great deal of coal is found in the mountains. Sechwan has many fertile plains and river valleys. The hills are terraced to the very top. The high plains and valleys are irrigated from tributaries of the

Yangtse. The soil will grow rice, wheat, maize, tea, opium, hemp, tobacco, drugs, oranges, and many other crops. Rice is very important. Mulberries are planted everywhere, and enor-

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FIG. 33. A CHINESE RICE FIELD

Notice the flooded fields and the dress and the pipe of the opium smoker.

mous quantities of silk are made. Sechwan looks like the rich land which it is. There are large handsome farmhouses, reached through groves of trees. Richly coloured temples make beautiful points in the landscape.

187. For the last thousand miles the

Yangtse flows through cultivated plains. A very important crop is tea, which is grown on the terraced hillsides. Great ships come up the river to Hankow, the largest tea market in China. Hankow, which means Han mouth, consists of three cities, and has over a million people. The name shows that it is built where a tributary comes in. The Yangtse reaches the sea near Shanghai, one of the great ports of the far East.

188. South China is mountainous. Much of the interior is covered with forests and inhabited by uncivilized tribes. The forests have been cut down in the lowlands. The clearings are irrigated and planted with rice, tea, opium, cotton, and other Chinese crops.

Canton, on the delta of the West River, is a great port. Opposite to it is the island of Hongkong, which is British. It does an enormous trade. Fuchou is a great tea port on the east coast.

189. Off the coast of South China is Formosa, a mountainous island held by Japan. Its forested mountains supply all the world with camphor. Chinese crops are grown where the lowlands have been cleared.

190. Japan. Japan consists of four large and many small islands. They are all moun-

tainous, with narrow valleys running into the mountains. Some of the mountains are volcanoes. The most famous is Fujiyama, which is seen in almost every Japanese picture.

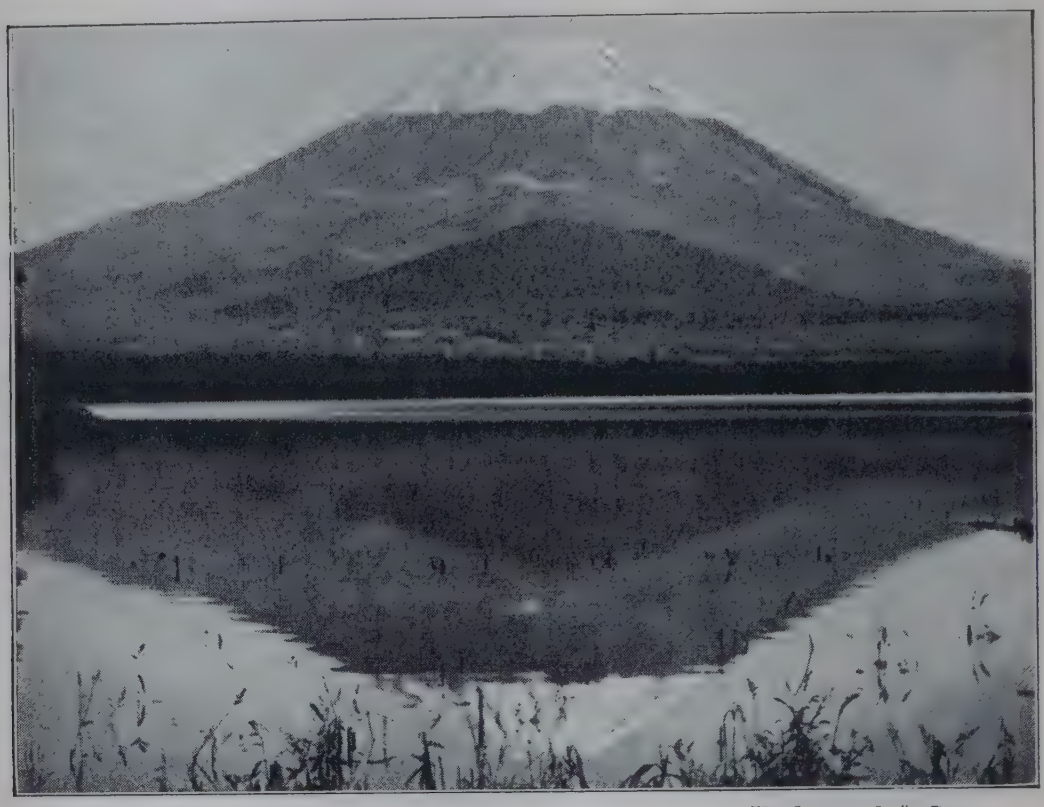

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FIG. 34. FUJIYAMA

Notice the typical shape of this volcanic cone. The higher part of the mountain is above the line of perpetual snow. The lower slopes are covered with forest.

It is on Hondo, the largest island. The plains are irrigated and planted with rice in the south. The monsoon rains fall just as the plants are coming into leaf. Tea is grown on the terraced hillsides.

Hokkaido, the northern island, is much

colder. It has fewer large towns. In the forests uncivilized tribes can still be found.

The centre of Japan is the lovely Inland Sea, dotted with mountainous forested islands.

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FIG. 35. A JAPANESE LANDSCAPE

Many large towns are built near it. Some are beginning to manufacture cotton and other goods. One of the largest is Ozaka, at the east end of the Inland Sea, on Hondo. Labour is cheap in the rice lands because food is cheap.

Japan has a long coast line, with many good harbours and busy ports. Nagasaki, opposite

to China, is the chief port of Kiushiu, the southernmost island. Yokohama, on Hondo, is the first port reached by steamers which have crossed the Pacific. It is the port for Tokyo, the capital of Japan.

191. The scenery of Japan is shown on Japanese fans, umbrellas, and prints. It is a mountainous country with many beautiful trees. The cherry tree is grown for its exquisite flowers. The temples are built in groves, and often on heights looking over a river or lake.

192. The life is very simple. Rice and fish are the chief food. The dress of the women is graceful and beautiful in colour. Many men wear European dress. The houses are built of wood and oiled paper. The rooms have hardly any furniture. There is generally one beautiful picture, or one bowl of flowers. The artistic work of the Japanese is very fine.

Exercises

1. Describe the basin of the Yangtse.
2. Name some ways in which North China differs from South China.
3. What do you know of Yokohama, Tokyo, Osaka, and Nagasaki?
4. What are the advantages and disadvantages of rice as a food?

CHAPTER XXI

THE SOUTH-EASTERN ISLANDS

193. The Monsoon Islands. Look out the south-eastern islands of Asia on the map.

FIG. 36. SEMBILING RIVER, BRUNI, BORNEO

Notice the Philippines, which are monsoon lands. They belong to the United States of America, thousands of miles away, on the other side of the Pacific. The Philippines are mountainous and thickly forested. In the clearings almost every kind of crop can be

grown. Many of the people are of Spanish descent. Some of the forest tribes are quite uncivilized. The capital is Manila, on one of the finest harbours in Asia.

194. The Equatorial Islands. The largest of the southern islands are Borneo, Java, and Sumatra. These have an equatorial climate. It is always hot and heavy rains fall at almost every season of the year. With heat and abundant moisture plants grow very quickly. The forests are as dense as any in the world. They contain many valuable trees. Apes and parrots make their home in their branches. Rubber is a valuable forest product.

195. Java belongs to the Dutch. Its rich volcanic soil is admirably cultivated. Much of the forest has been cleared. Coffee, tea, rubber, tobacco, quinine, spices, and sugar are grown.

196. In the other islands the clearings are smaller. There are wild tribes in the forests of the interior. Rice is grown in the swamps. Spices grow wild. The sago palm takes the place of rice as the chief food. Population is thickest round the coast, where the fisheries are important. Some of the islands are rich in tin, petroleum, and coal.

197. Summary. We have now seen every natural region of the world. Round the equator

are dense hot wet forests which are only thinly peopled (ch. xxi). The monsoon lands produce a great variety of crops and are very densely peopled (chs. xv–xx). The hot deserts cover thousands of square miles, and are very thinly peopled (chs. iv–vi). In the steppes we find the wandering life, and the keeping of animals as the chief occupation (chs. ii, iii). Farther north are the cultivated steppes which are beginning to grow wheat (ch. vii). North of these are vast temperate forests (ch. viii). Still farther north is the frozen tundra (ch. viii). The islands to the north are covered with eternal ice. The great height of much of Asia affects the life of the people in many ways (chs. ix–xiv), and so does the abundance or scarcity of water (chs. ii–xxi).

Asia has been the home of the great religions of the world. The monsoon lands are among the oldest civilizations in the world.

Asia contains more than half the inhabitants of the world. The population is always growing. Emigrants cross the ocean to America and Australia, and are becoming very numerous on the other side of the Pacific.

Exercises

1. What do you know of the south-eastern islands?

2. Give examples of uncivilized tribes being found in the forests of a civilized country. Can you suggest any reason?

3. In what respects is Asia the most interesting continent in the world?

4. Give examples to show the importance of irrigation in different parts of Asia.

5. Show that every natural region of the world is found in Asia. Give examples.

6. Describe the kind of life lived in each.

7. Explain clearly why some of the natural regions of Asia have many more people than others.

8. Name the different kinds of food which are most important in the different regions. Explain the reason.

9. Write short accounts of the reindeer, the camel, and the yak. Show how each is important in the life of its owners.

10. Both the cool and the hot forests are thinly peopled. Why is this?

11. Explain as clearly as possible how men's lives in Asia are affected by the abundance or scarcity of water.

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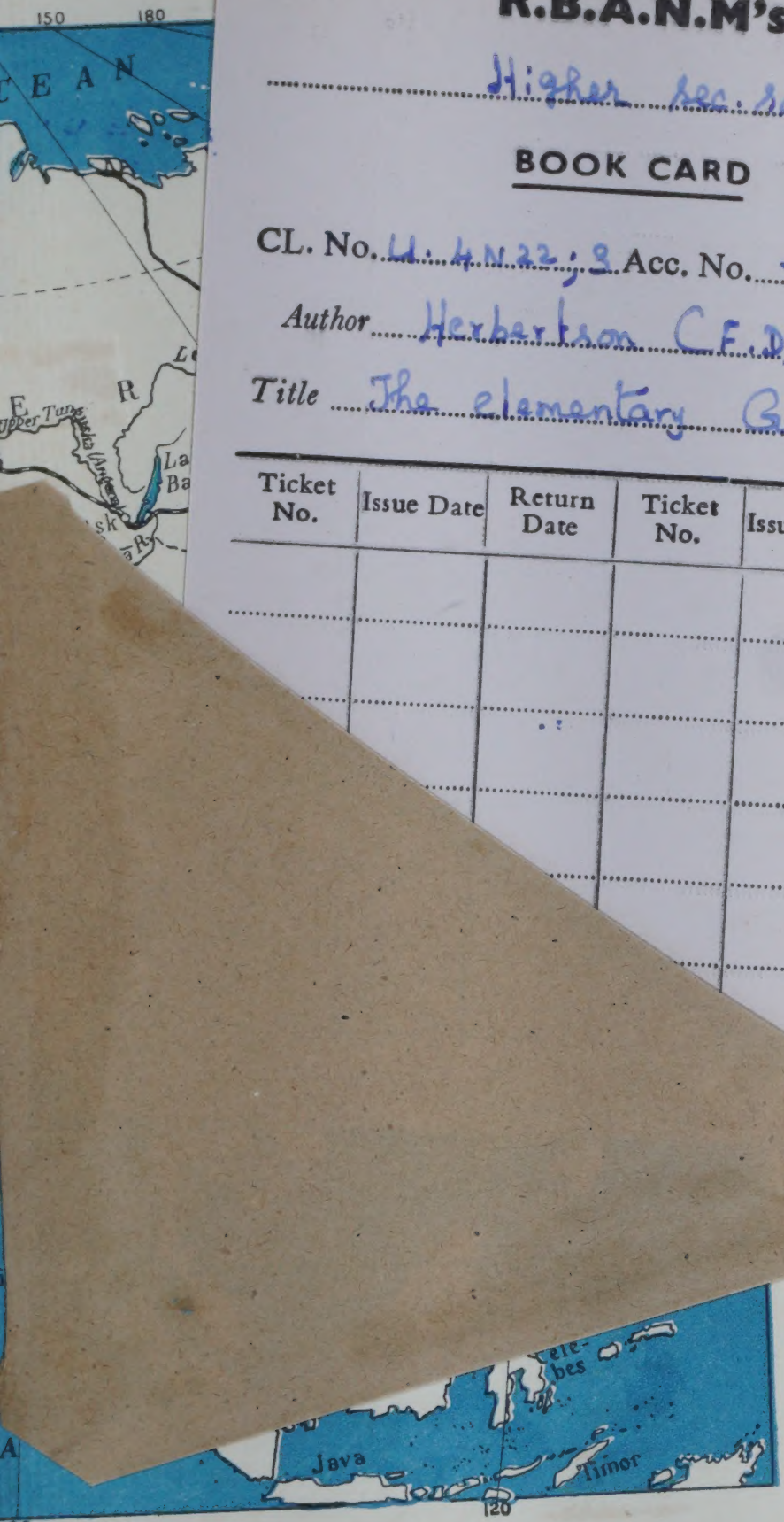

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